DANISH FOREIGN OFFICE JOURNAL

NUMBER 39 1961

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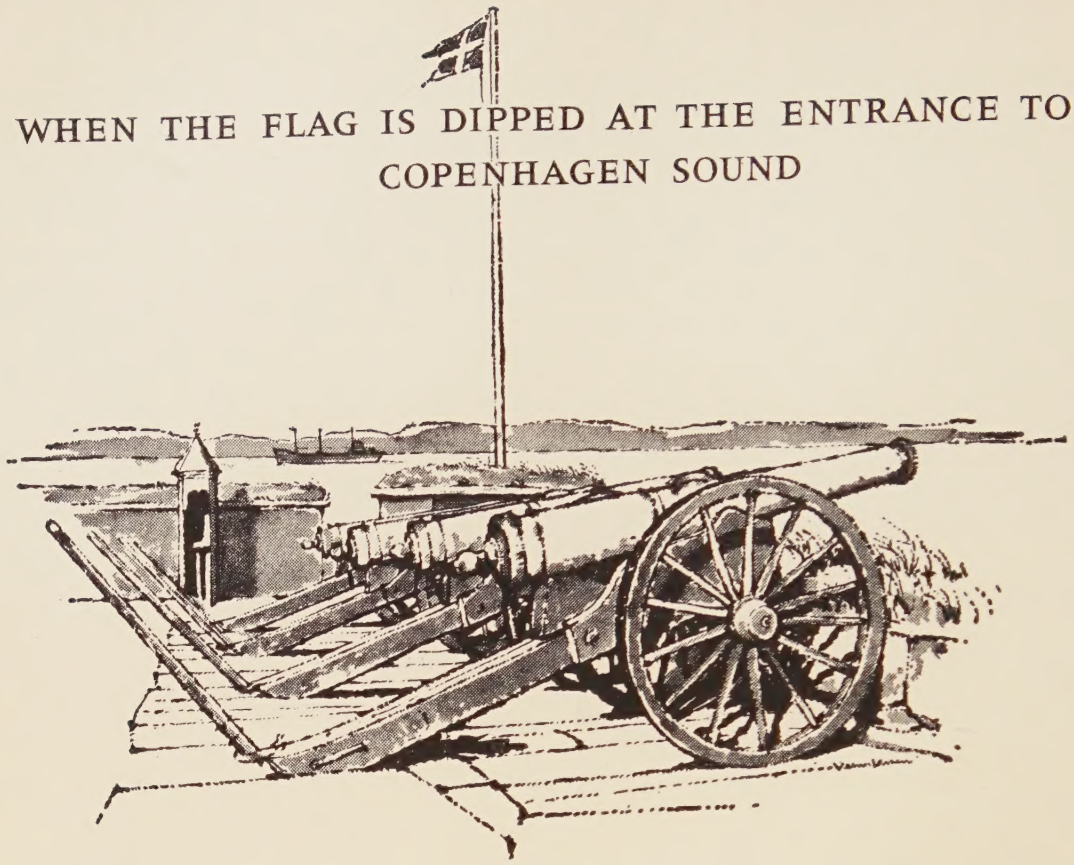
WHEN THE FLAG IS DIPPED AT THE ENTRANCE TO COPENHAGEN SOUND



When late-medieval ships stood into the narrow Sound between Denmark and Sweden, the cannons roared their warning from the Kronborg Castle bastions for the captains to drop their anchors and pay Toll on their cargoes. More than five centuries later, this heavy Toll has given way as a national source of income to exports and the roar of the guns has been succeeded by a warm-hearted tradition followed to this very day: when the flag is dipped at Kronborg it is meant as a greeting to the crews from the Commandant of Prince Hamlet's ancient castle: Godspeed and Bon Voyage!

The same respect for tradition prevails in the house of Cherry Heering. Now as then, ships stand off the Sound, many of them loaded with the famous liqueur of Denmark. Now as more than a hundred years ago, the Heering family sends its own ships overseas to serve as Ambassadors for the things which make the stately Peter F. Heering mansion in Copenhagen the centre of a far-flung organization: cherry trees in bloom in the vast Heering orchards, the old oak casks in the cellars, a business spirit deeply rooted in bygone years, and the fair name and fame of Cherry Heering. Unimpaired through good times and bad, the flavour of Cherry Heering is as strong and as sterling as it was in the days of the Sound Toll, and on every foreign shore – from San Francisco to Singapore – from Melbourne to Montevideo – the flag is dipped to loyal friends in the tradition of enjoyment: Cherry Heering – cheers!

CHERRY HEERING

PETER F. HEERING - COPENHAGEN - DENMARK

DANISH FOREIGN OFFICE JOURNAL

COMMERCIAL & GENERAL REVIEW

BY DOG SLEDGE IN THULE

The author made a sledge journey in the Thule district this year, together with native Greenlanders; in this article he gives his impressions of living conditions in this remote Danish province. By Frits Høyrup..... *page 11*

FREDERIKSBORG CASTLE AND HISTORICAL MUSEUM

Frederiksborg Castle in its present appearance dates from the beginning of the seventeenth century and owes its existence to King Christian IV. It was the residence of Danish Kings, but in 1877 J. C. Jacobsen, the brewer, offered to restore the Royal wing on condition that the castle should form a Danish Versailles, with the dual object of serving as Royal quarters on special occasions and being otherwise the centre of a national historical museum. By Jørgen Paulsen. ..... *page 15*

RADIO AND TV FOR THE MILLION

The exports of the Danish radio industry continue to expand. When it was found that tariffs prevented the sale of complete sets it went in for components, which are now marketed in many parts of the world. The industry's research work and its staff of highly qualified technicians have been of great importance to its succes. By K. Henning Petersen..... *page 19*

EXPORTS FROM THE VILLAGE

The Danish village is the centre of general farm production of milk, cheese, pigs, cows and calves, eggs, poultry, and other commodities. New demands are being made on it and a Commission appointed by the Minister of Agriculture is studying the agricultural industry in all its aspects. By Jørgen Søholt Christensen... *page 22*

ART ON ROLLS

Since 1945 the Danish wallpaper industry has developed rapidly, thanks to close collaboration with artists, who in patterns and colours have succeeded in expressing Danish taste and tradition. By Sven Hauerbach..... *page 26*

FROM SILK TO NYLON

Nylon stockings were not a Danish invention—but Danish firms were quick to see their export possibilities. The Danish textile industry has kept up with fashion trends while remaining competitive in price. By Aksel Bro Rasmussen. ..... *page 29*

BOOKSHELF..... *page 31*

INDUSTRIALIST AND IDEALIST

This year has marked the 150th anniversary of the birth in Copenhagen of J. C. Jacobsen, the brewer. A child of his time, he had the wit to grasp the opportunities which the dawning industrial era offered. In setting up the Carlsberg Foundation, whose activities are both cultural and scientific, he put industry at the service of the Danish people. By Ole Vinding.... *page 32*

SIDELIGHTS ON DENMARK..... *page 35*

The cover, which was drawn by Alex Secher, shows Frederiksborg Castle at Hillerød (North Zealand) and refers to the article inside

NUMBER 39 . OCTOBER 1961

Numbered serially, irrespective of the year

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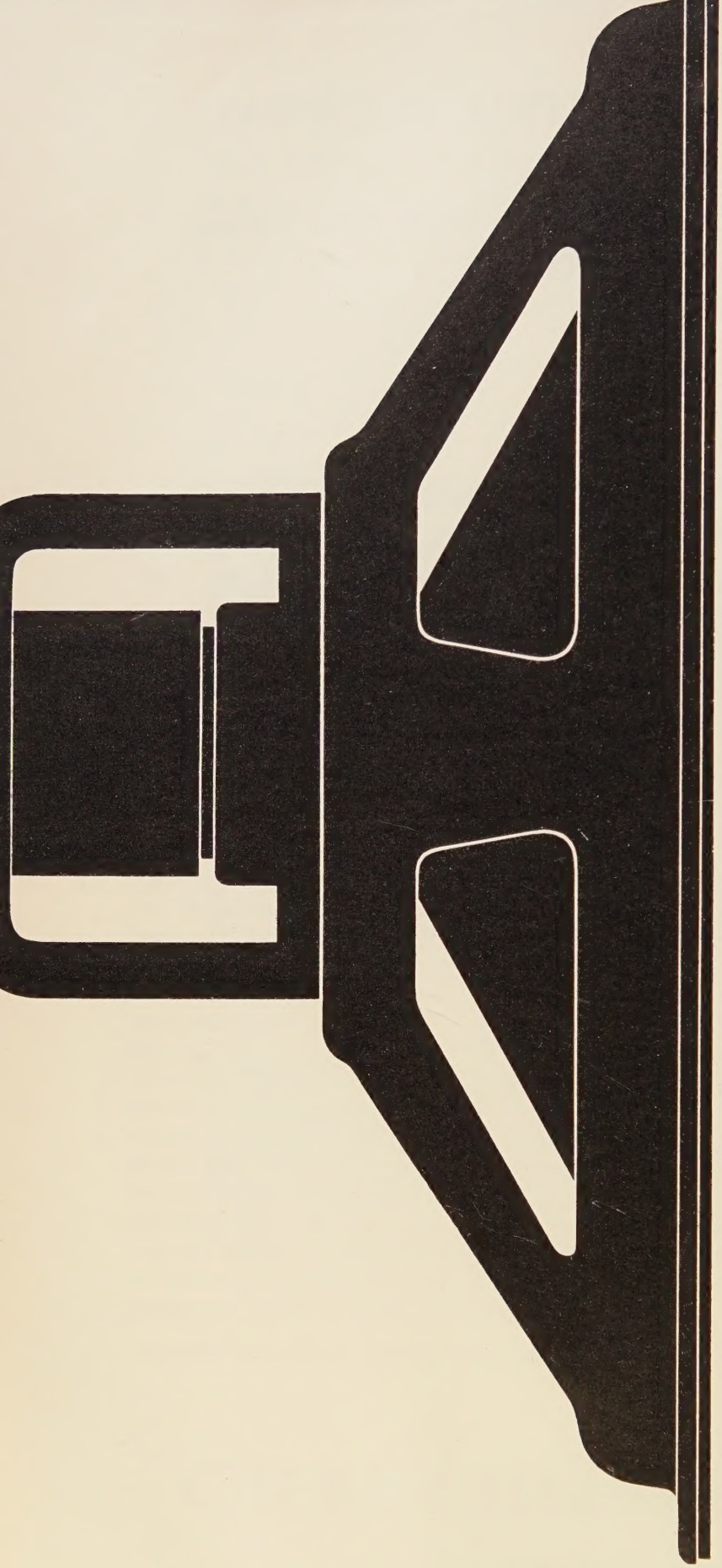

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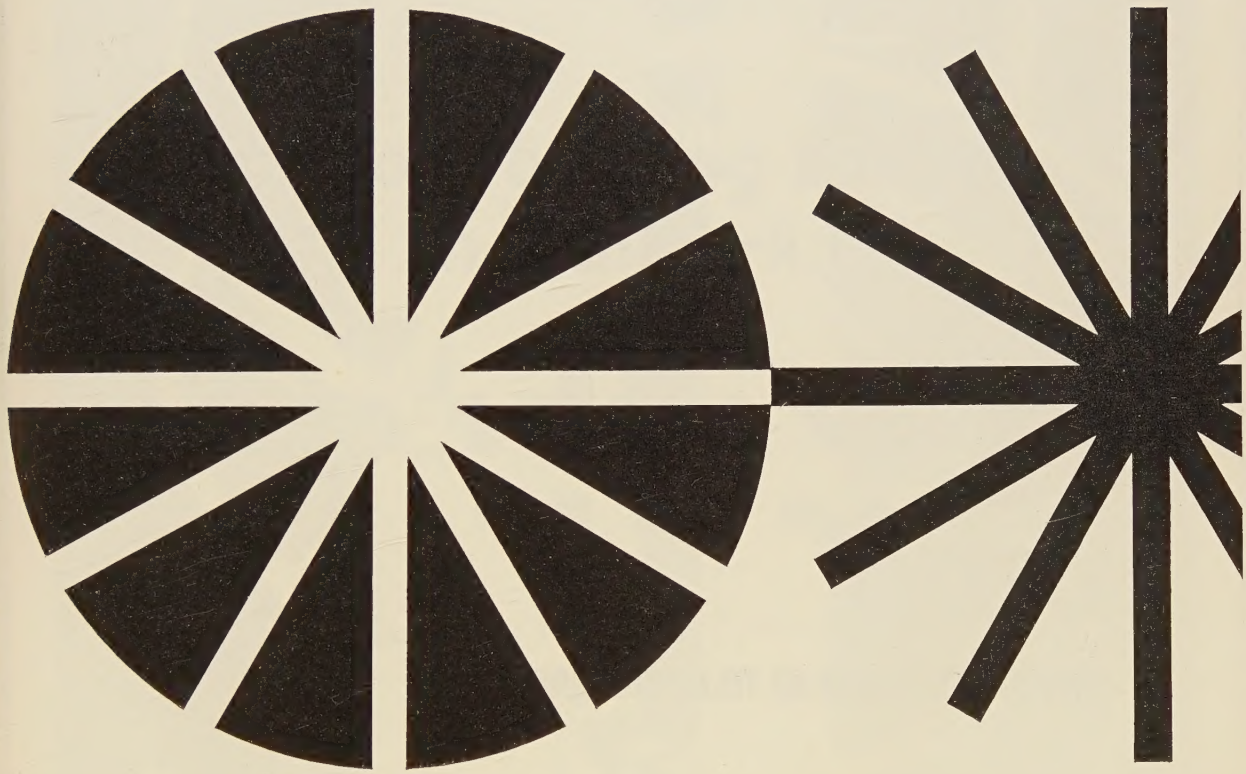

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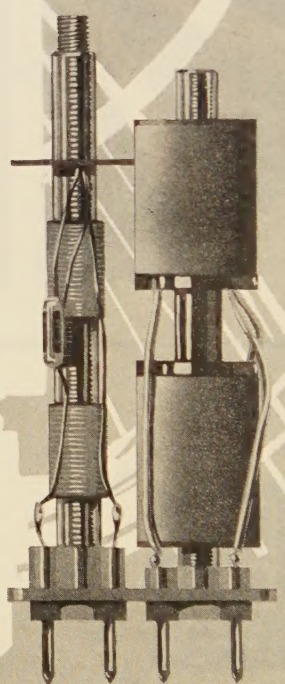

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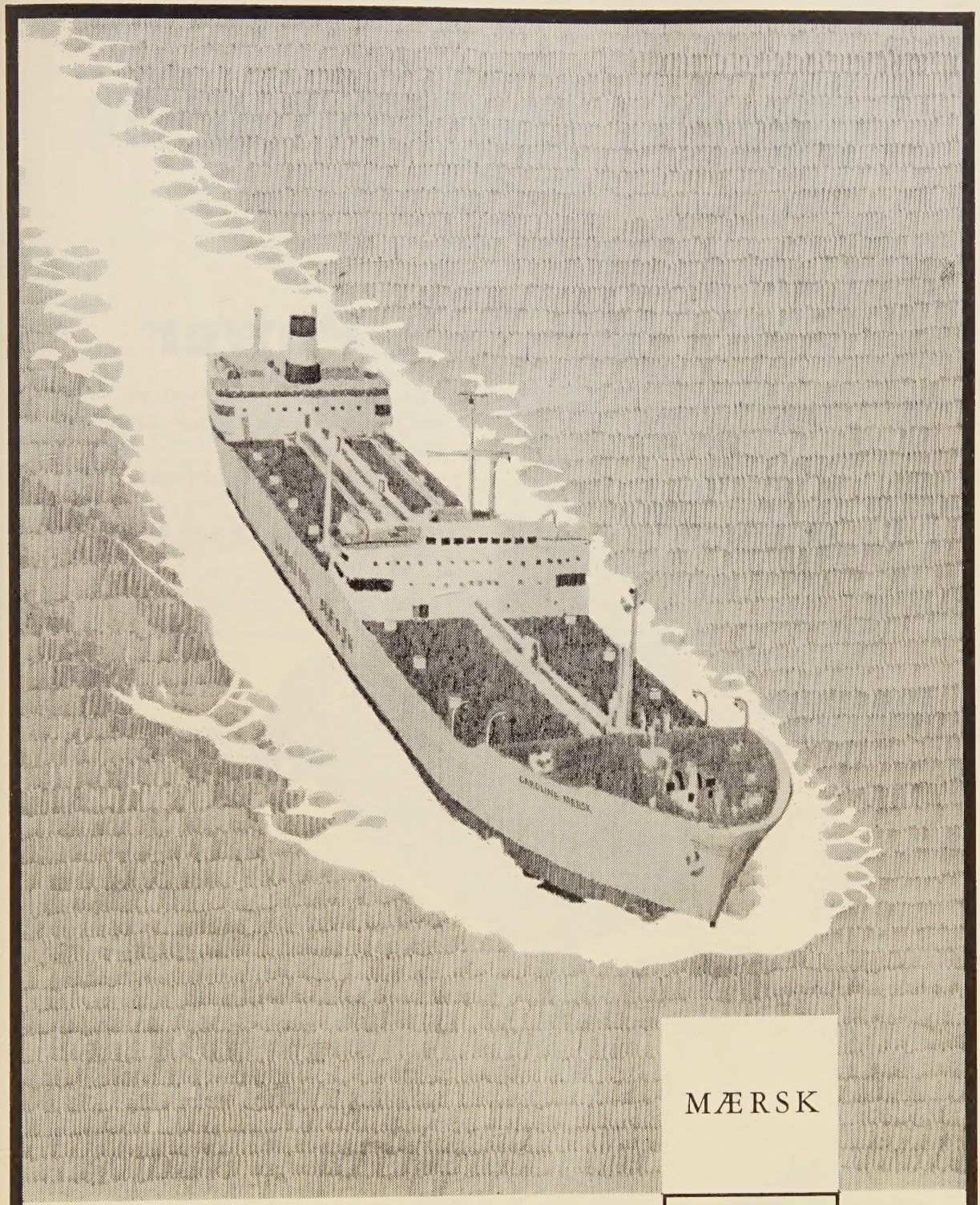

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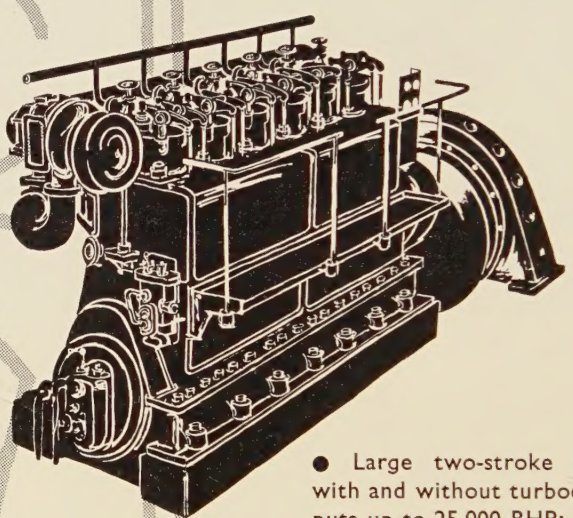

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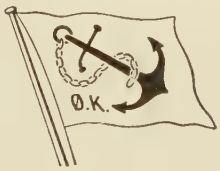

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DANISH FOREIGN OFFICE JOURNAL
NUMBER 39 . OCTOBER 1961

By Dog Sledge in Thule

By Frits Høyrup

The author made a sledge journey in the Thule district this year, together with native Greenlanders; in this article he gives his impressions of living conditions in this remote Danish province

Greenland is the world's largest island, with a total area of 2,175,000 square kilometres (840,000 square miles), of which nearly two-thirds lies under the ice-cap. The total population is 30,000.

They live by hunting marine mammals, fishing and sheep-breeding. Up in the north-west corner of Greenland lies the district of Thule, isolated from the rest of the country. The 400 Eskimos in this region—the northernmost people in the world—have to live on what they can catch. Here in this bitterly cold outpost there are seals, narwhals, polar bears, and polar foxes.

The Eskimos manage—and manage well. They are skilful hunters. Boys learn to fire a gun at the age of eight and often go out on long sledge journeys with their fathers, hunting seals and bears.

On a journey in the Thule district I had ample opportunity to see how the hunting tradition is handed down from one generation to the next.

The Greenland boy Pok in blue anorak, ready for the journey

In Good Hands

I was a passenger on a postal journey from Qanaq (New Thule) to Dundas. Most journeys in northern Greenland are made by dog sledge. From Qanaq, the Thule capital, to Dundas it is a couple of hundred kilometres; the journey takes over twenty-four hours.

An old Eskimo, Nasaka, took me with him on his sledge. I knew I was in good hands, because he was reputed to be one of the best sledge-drivers in the district. On the other sledge was young Minik (aged 36) with his nine-year-old son Panigpok in white bearskin trousers and blue anorak.

Minik had decided to take Pok at the last moment, and

Cutting a new lash for the dog whip while travelling

Pok found it hard to restrain his delight when his father told him to get ready. He ran off to get his things while we packed trunks and mail bags on to the sledges.

The most incredible things are to be found on a dog sledge. Packed at the bottom will be a huge lump of walrus meat—food for hungry dogs. On a layer of skin above it will be the baggage. In a box at the front there are primus stove and paraffin can. The whole will be made fast with sealskin thongs. There will be guns, harpoons, ammunition, and spare haulage ropes. Nothing is forgotten. Between the layers Nasaka's white tent is stacked. We are carrying our house on our back like a snail.

Copenhagen Mail in Three Days

In the mail is Mrs. Jensen's letter to the mail-order department of a Copenhagen department store. This letter will reach Copenhagen by a strange combination of means. The first day and a half it will go by dog-sledge across field ice, glacier, ice-cap, and fjord ice; then by jeep the 10 kilometres from Dundas to the Danish-American base at Thule, by American plane to Søndre Strømfjord, and thence by SAS polar service to Copenhagen. With luck the letter may arrive in three days.

There is no waving or embracing as the sledges depart. Travelling here is an everyday occurrence. We bump unnoticed over the rough shore ice. Soon we are on smoother, snow-covered ice and the dogs are racing along frantically. Minik and Pok come speeding behind. The spring sunshine has opened several cracks in the ice, and now and then we have to make a detour in order to avoid them. Minik and Pok catch up with us. Whips crack as the dogs fly at one another's thoat.

Tea Party by the Glacier

Far ahead an approaching sledge appears as a black streak on the ice. When we meet we seize the opportunity for a brief halt, exchanging experience about the state of the ground and the chances of catching seal.

We move on across the snow-covered field ice. Hard-frozen, gigantic icebergs tower like enormous white palaces above the white surface.

After three hours of driving we have crossed the ice of Inglefield Fjord and are at the foot of the glacier.

'Tea-party now,' Nasaka shouts.

Pok takes the wooden box containing the primus and a pot from the sledge. The box is placed on its edge. A moment later the primus is roaring away. Pok has whipped out his large snow knife and carved off some big pieces of ice. Elegantly he impales the pieces on the tip of his knife and throws them into the pot. I spread teacakes with butter and cheese. Pok likes the teacakes but leaves the cheese to his father.

After tea I seize the whip in a desperate attempt to learn the art of using it. One moment I get eight metres of whip-lash coiled round my legs, the next moment round my neck.

The dogs have plunged their noses into the snow in order to cool down and moisten their tongues. Hearing the faint cracking of the whip they lazily lift their heads.

Rested and refreshed we now have the tough job of ascending the slippery glacier. Where it is steepest we have to slog along behind the sledges. It is hard work in the warm skin clothing; the sweat pours from us. Pok takes his turn with the rest. Together with his father he stalks along behind the sledge to ease the work of the dogs.

An hour or so later we can be seated again. Slowly we glide up and on to the white surface of the ice-cap. Dark clouds roll only a metre above our heads.

Soon we are descending into Granville Fjord. The sun smiles on us once more, but its brightness is dazzling.

Pok Practises Shooting

For a while the way leads down through a narrow gorge with large boulders on either side. Holding on to the uprights Nasaka steers the sledge nicely past treacherous rocks. Once on the smooth ice of the fjord both sledges are turned upside down, so that the runners can be smoothed down after their journey across the glacier. It is tea-time again, with Pok as the waiter. He makes many teasing remarks about my mug, which is no less than a litre measure. They had run out of ordinary mugs at the store at Qanaq.

Pok cannot settle down for long at a time, but uses the stop to practise shooting with his father's gun. He places a large block of snow—carved out with his snow knife—on edge, and in front of it he arranges an old skin glove. This is to represent a seal's head.

Stepping back he lies down at a suitable distance from the target. A dozen shots are fired and each time Pok hits the target. Minik stands behind his son, giving him hints about the niceties of shooting. Praise is also given whenever Pok makes a hole in the glove.

Camping in the Wastes

After a few hours of sledging we arrive at a low headland where there is a small snow-free area. Here there are many stones and soft, dead grass from last year. Nasaka lays his head aslant and places a hand to his cheek.

'Sleep, sleep—sleep!' he cries.

Pok removes the stones from the camping ground, the large ones being laid round the tent to hold down the canvas. The harpoons are used for tent pegs. Inside the tent reindeer skins are spread. A moment later two primus stoves hiss their sweet melody inside the tent. Outside it is well below zero. The sun is low down behind the mountains, but it does not set. We are in the region of the midnight sun.

In the tent it is soon broiling hot. We make coffee and put a tin of sausages into the water. Pok eats five sausages and is sorry there are no more.

During the night another hunter has encamped near by and the next morning he invites us to seal meat. Pok is quick off the mark with his pocket knife. Taking a hunk of boiled meat he cuts off a sliver and stuffs himself till the

Encamping for the night in the wilderness

oil drips from the corners of his mouth. There are no paper serviettes on these journeys; a tuft of dry grass is just as good.

We Shoot a Seal

The weather is fine. It is essential to get off as soon as possible, as the seals have come out of their blow-holes to bask in the spring sunshine. At eight o'clock we move off. An hour later Nasaka descries a seal well ahead of us on the ice. He gets ready to hunt, but the noise from an aeroplane frightens it back into its hole and it disappears under the ice. Soon after there is another seal on the ice. This time it is Minik's turn.

We stop the sledges two or three kilometres from the spot where the seal lies sun-bathing. The dogs are instructed by means of the whips to keep quiet. Taking a tuft of the soft hair from the reindeer skin, Minik throws it into the air in order to see which way the breeze is blowing; for he will approach the seal from the lee-side, so that the animal will not scent him. Seals have poor eyesight but a good sense of smell. Minik inserts his gun into the sliding sail—a white canvas sheet behind which he can hide when he steals up to shoot his prey. He pushes the gun forward on a small sledge.

Cautiously Minik moves forward a couple of kilometres till he is almost within shooting range. Then he lies down and crawls slowly forward, pushing the sail and the gun in front of him.

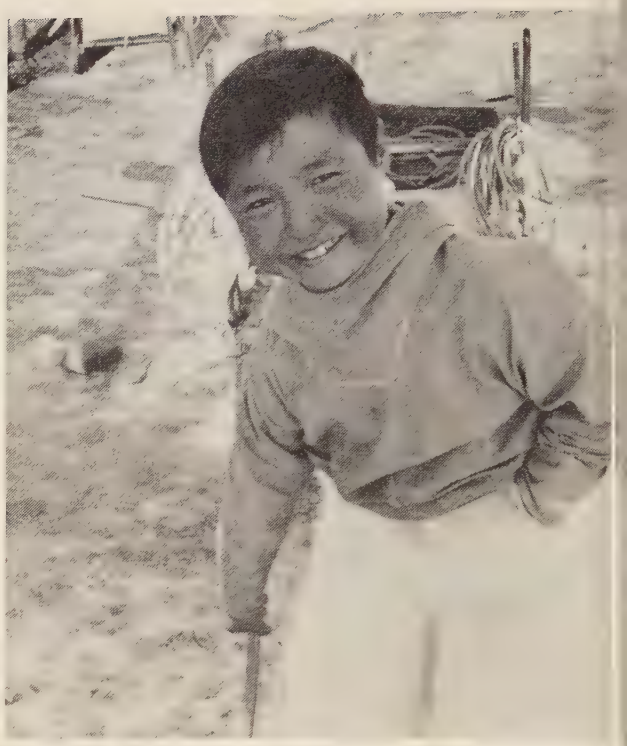
Raw Liver—a Delicacy

A shot rings out. It must kill instantly or the seal will vanish with a splash into its hole. We sit tensely waiting at a distance. At the sound of the gun the dogs know that they have to run forward to Minik. They dash off, and we must hold tight in order to stay on the sledge. For a couple of hundred metres the sledge swings from side to side.

When we reach the sledge Pok inspects the seal with the eye of a connoisseur. He seizes it by the flippers and pulls it towards his father's sledge, leaving a trail of blood on the snow.

The seal is laid at the back of the sledge under the bag-

Pok hauling the seal towards the sledge



The journey over, Pok stands smiling in front of the dog sledge

gage, to be cut up with a sharp knife at the end of the day's journey. The skin is carefully flensed. This will be sold to the Royal Greenland Trade Department, which re-sells sealskins to international buyers at auctions in Copenhagen, after which they are made into warm ladies' cloaks, moccasins, and knapsacks.

The intestines are thrown to the dogs, but the liver is eaten raw during the dismembering—this is a delicacy, with no oily taste. The meat is cut into convenient pieces. Some of it is put into the pot for the evening's feast; the rest is packed on to the sledge for eating later.

Back to Civilization

With the smell of seal in their nostrils the dogs grow restless. Nasaka and Minik crack their whips over them. We continue our journey across the ice. We have long been able to see the characteristic outline of the Dundas Mountains, flat as a pancake at the top. Distances in Greenland are deceptive, and it is several hours before we arrive at the mountain. Now the dogs increase their pace, having smelt other dogs and people ahead. Soon we draw into the small bay at Dundas, the old Thule founded by the Danish polar explorer Knud Rasmussen.

It is late afternoon. The 30-hour sledge ride from Qanaq to Dundas is over.

Here at Dundas some Eskimo families have pitched their tents. The new arrivals are made welcome; there is talking, laughing, and gesticulating. Pok quickly finds some boys of his own age and they begin to play. He has happily forgotten he is a young hunter.

Gathering my baggage I go to a small house a few paces from the shore. Here a Danish carpenter, Arne Jensen, lives with his Greenland-born wife, Emma. They have rolled down the blinds and are watching a western on television, broadcast from the Thule base.

At one bound I am back in civilization.

Danish Museums:

Frederiksborg Castle and the National Historical Museum

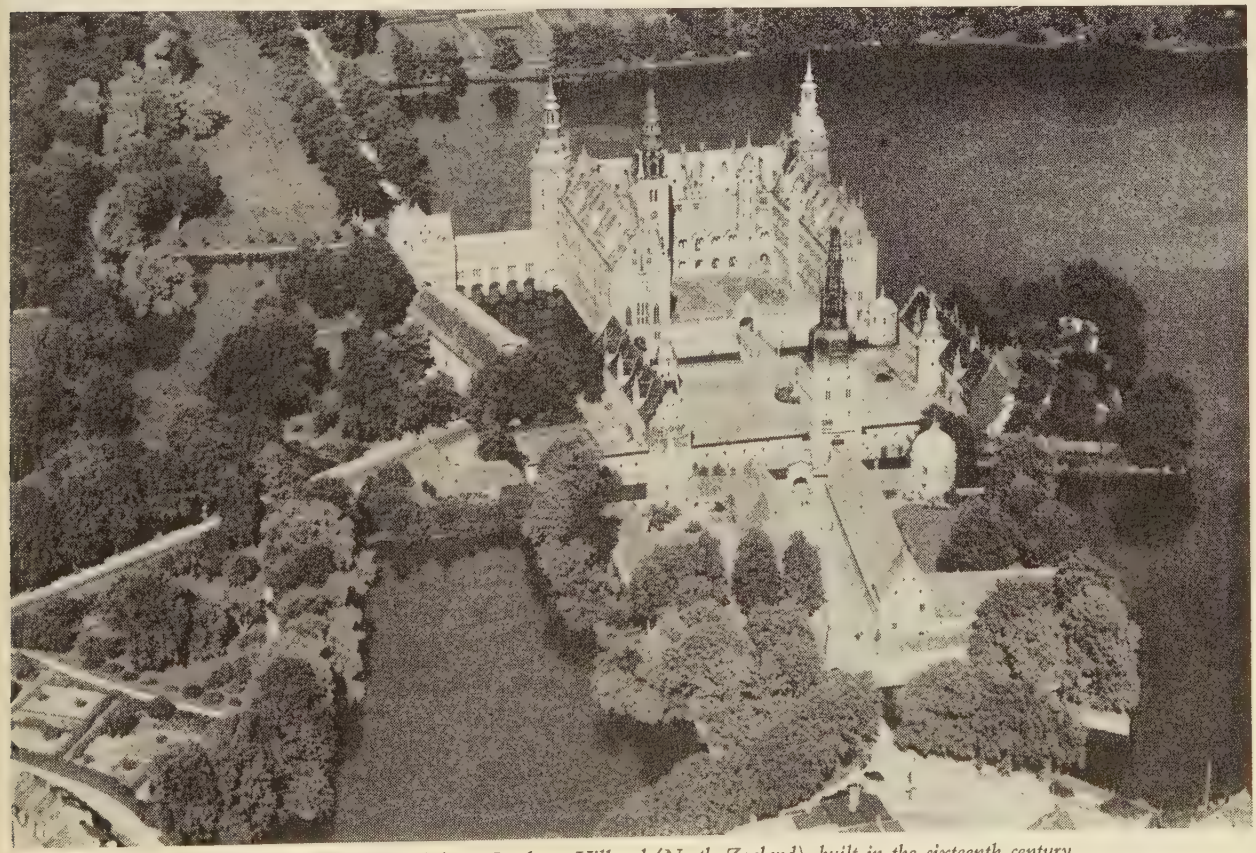
By Jørgen Paulsen, Director

Frederiksborg Castle in its present appearance dates from the beginning of the seventeenth century and owes its existence to King Christain IV. It was the residence of Danish kings, but in 1877 J. C. Jacobsen the brewer offered to restore the Royal wing on condition that the castle should form a Danish Versailles, to serve as the centre of a national historical museum and Royal quarters on special occasions

Frederiksborg Castle takes its name from Frederik II, who acquired the manor of Hillerødsholm, which had stood on the site for centuries, by exchange in 1560. As the centre of a large royal hunting estate, which included most of the compact woods of North Zealand, the new castle became a favourite resort of the sporting king.

Of the buildings dating from the time of this king only small parts remain. They are unassuming in size and appearance but none the less charming and interesting. In particular, the part on the islet nearest the town of Hillerød with the remarkable gateway, a high gabled house in medieval style together with two distinctive circular towers, dated 1562, gives an impression of a castle building in Denmark prior to the time when the country came truly into contact with European architecture.

The bulk of Frederiksborg as it looks now dates from the period *c.* 1600–1620 and owes its existence to King Christian IV. The eldest son of Frederik II, he was born here in April 1577. He grew up at a time when noblemen were building extensively all over the country. While still a young man he aspired to raise the monarchy above the prevailing aristocracy. He showed an early personal interest in architecture and throughout his long reign he was a keen builder—not, as he said—'for the sake of his recrea-



Air photograph of Frederiksborg Castle at Hillerød (North Zealand), built in the sixteenth century

tion, but for the adornment and honour of the whole kingdom'. By great good fortune most of his buildings have survived; in Copenhagen the capital, in particular, one can still delight in buildings like the Bourse, Rosenborg Palace, the Round Tower, the Armoury, Nyboder, and many others.

In Fertile North Zealand

About the year 1600 Christian IV decided to replace his father's unpretentious Frederiksborg Castle with a building more in keeping with the times and his own ideas of architecture. In the subsequent 20 years he built the majestic, imaginative, and magnificent castle which, in the main, has been fully preserved externally.

Like Rosenborg and the Bourse, Frederiksborg is in the special Renaissance style which stems from Netherlands architecture, but which under Christian IV developed fairly independently in Denmark where various traditional features were preserved. The king, though he relied on commissioned Netherlands architects, as Frederik II had done when building Kronborg Castle 20 years earlier, often intervened himself and was personally active in both the planning and the execution of his buildings. To anyone familiar with him there is no doubt that he preferred trusted craftsmen to sophisticated architects. Therein lies the cause of certain architectural weaknesses in several of his buildings, but also the explanation of the fertility and imaginativeness which often distinguish them.

In this respect the difference between Kronborg and Frederiksborg is characteristic. On the one hand we have the architecturally severe castle by the Sound, of European standard in design and details; on the other, the more domestic, lively, and gay palace set in fertile North Zealand scenery where the great variety creates the impression of a rich cornucopia.

Painting of Christian IV, who built the castle

This is emphasized by the relative siting of the many buildings, by the employment of different building materials, such as red brick, yellowish-grey sandstone, copper roofs, and glazed or red tiles, by the rich embellishment of sculptured figures, porches, balustrades, lattices, and carved or riveted doors and gateways, not to mention the many gables, towers, and spires of various designs. Add the romantic situation on three islets in a small lake with scope for the formation of strange reflections, the surrounding landscape of woods, parks, and gardens, together with the diverse architecture of the town of Hillerød across the lake, and the picture could scarcely be more varied.

A Treasure Preserved

Of the magnificently decorated rooms and the costly furnishings at the time of Christian IV there is evidence in the old inventories. Of all this little remains. But the principal treasure, the Castle Chapel, has survived in the original form with its rich sandstone ornamentation and all its fittings of carved and inlaid pews, pulpit, ebony and silver reredos, and the wonderful Compenius organ o 1610, one of the finest musical instruments in the world.

During the period of Absolutism (1660–1849) this church interior, for our latitude so unusual and so sumptuous, was the setting of the solemn anointing and coronation ceremonies which with pomp and circumstance marked each royal accession. The first took place in 1671; the last was the coronation of Christian VIII in 1840. This old tradition, which more than anything else had contributed to Frederiksborg's character as the national home of ceremony, was discontinued with the introduction of the modern Constitution.

In the surrounding gallery of the chapel are window piers and niches hung with the arms of the Knights of the Elephant and Grand Commanders of the Dannebrog orders. It has been so since 1692 when Christian V commanded that the gallery should be the Knight's Chapel of the Danish orders.

From the reign of the same king date a couple of other well-preserved rooms at state, the Council Hall and the approaching Secret Passage, situated in an adjacent side building. The decoration of these rooms with imposing stucco work and paintings influenced by French High Baroque dates from the 1680s.

Beginnings of Historical Museum

For close on 100 years after the reign of Christian IV Frederiksborg was the principal seat of the Danish kings alongside Copenhagen Castle. Many great royal events were celebrated here. The castle's name was inscribed in the history of the Northern kingdoms when the Treaty of Frederiksborg put an end to centuries of war between Denmark-Norway and Sweden. From 1812 the castle was the home both of the nation's old collection of historical portraits and of a collection of pictures of celebrated men and women. They were the beginnings of an historical museum.

Under Frederik VII, however, Frederiksborg again became a royal seat. During the king's residence there in

Interior of Frederiksborg Castle Chapel

Frederiksborg Castle, viewed from the town bridge

the winter of 1859 fire broke out in the main building, which practically burnt out—except for the Chapel. Only the massive outer walls remained when the fire had raged for nearly 24 hours. This sad event was regarded as a national disaster. But with astonishing speed agreement was reached to restore the castle to its former state. The work was entrusted to a vigorous young architect called F. Meldahl.

The funds were raised by various means: by a Government grant, by a large-scale national subscription, by means of a special lottery, and by voluntary donations. In five years the castle had been re-roofed and the chapel was again in use. During the subsequent years efforts were concentrated on the reconstruction of the destroyed state rooms, the Banqueting Hall, the Knights' Room, and the Rose Window and Oratory Prie-Dieu. This work made slow progress and by the 1870s no decision had been made about fitting out the other rooms. The simple fact was that no one knew what the castle was to be used for.

A Danish Versailles

The solution came unexpectedly. During the restoration outstanding generosity had been shown by one man, the brewer J. C. Jacobsen, founder of the Carlsberg Breweries. He had made his contributions unobtrusively, towards the national collection and for the restoration of the Prie-Dieu, the Knights' Room, and the Banqueting Hall. When it became increasingly clear to him that the case called for a big future project if the restoration was to be fully successful, he came forward openly as the great benefactor.

In 1877 he offered to pay for the further restoration of the Royal wing—a couple of years later of the Princess's wing also—on condition that the castle should become a Danish Versailles serving the dual purpose of State rooms on special occasions and being otherwise the centre of a national historical museum. This magnificent offer met with the King's and the Government's approval, subject to the condition that Jacobsen would also assume responsibility for the future maintenance of the museum. He thus had to consider what was the best means of securing an independent and successful future for such a museum. The result was that the museum was established as a special section of the Carlsberg Foundation which he had founded a few years earlier. On April 5, 1878, the National Historical Museum of Frederiksborg was set up by Royal Ordinance.

Of all the great gifts of J. C. Jacobsen to the Danish nation Frederiksborg Museum is the one which has been most generally noted, partly because its activities are of general public interest, and partly because the founder himself took so much interest in it.

Picture of National History

In the more than 80 years that have elapsed since its establishment over six and a half million people have visited the museum. Whereas it took 25 years to reach the first million visitors the same number is now passed in four years. There are no figures showing the respective visits of Danes and foreigners, but on a conservative estimate the two groups are probably about equal. Of the approximately 250,000 visitors a year it is thought that about 125,000 are foreigners.

Frederiksborg Museum heads the list of Danish museums for attendance. Undoubtedly it is favoured both by its situation in the midst of North Zealand and by its location in the fascinating old castle that is so popular with visitors. The setting and the contents supplement one another and attract tourists in large numbers. They are delighted by the imaginative exterior and the noble rooms inside, and by the copious collections of historical pictures, portrait paintings, furniture, and applied art in chronological order, which give a visual and tangible picture of the national history and culture during the last 400–500 years.

Valuable Acquisitions

Figures, however, are only one aspect of the question. The other is the museum's continued growth. Thanks to grants by the Carlsberg Foundation, it has been possible over the years to acquire so many valuable new additions both at home and abroad that one can speak not only of a continued extension but also of a steady improvement of the collections. It may safely be said that the museum serves to fulfil the aim of J. C. Jacobsen when in 1877 he put forward his plan, expressed thus in his own words:

'A life shared with the relics of the past rouses and educates the people's historical sense and strengthens their awareness that they have had their share in man's general cultural development and thereby their appreciation of the duties which this inheritance imposes upon present and future generations; and this awareness and appreciation will not fail to fortify the people's self-esteem and moral strength, which in a small nation like ours is highly necessary'.

Radio and TV for the Million

By K. Henning Pedersen

The exports of the Danish radio industry continue to expand. When it was found that tariffs prevented the sale of complete sets it went in for components, which are now marketed in many parts of the world. The industry's research work and its staff of highly qualified technicians have been of great importance to its success

Kitchen tables and dimly lit basements were the precursors of the many conveyor belts on which the Danish radio industry is now turning out its products, products which are so successful that exports have multiplied in the last ten years. It is true of this industry as of other Danish industries that it began under unassuming conditions, often as a spare-time occupation with what was new and exciting in the 1920s—though combined, in those who were most far-sighted, with visions of something which would some time become important.

Parallel with the development of radio sets went a development in which sections of the new industry concentrated on components for the section making the sets. The same has happened more recently with the rise of television and the presenting of new—and technically very great—demands on components for such involved equipment.

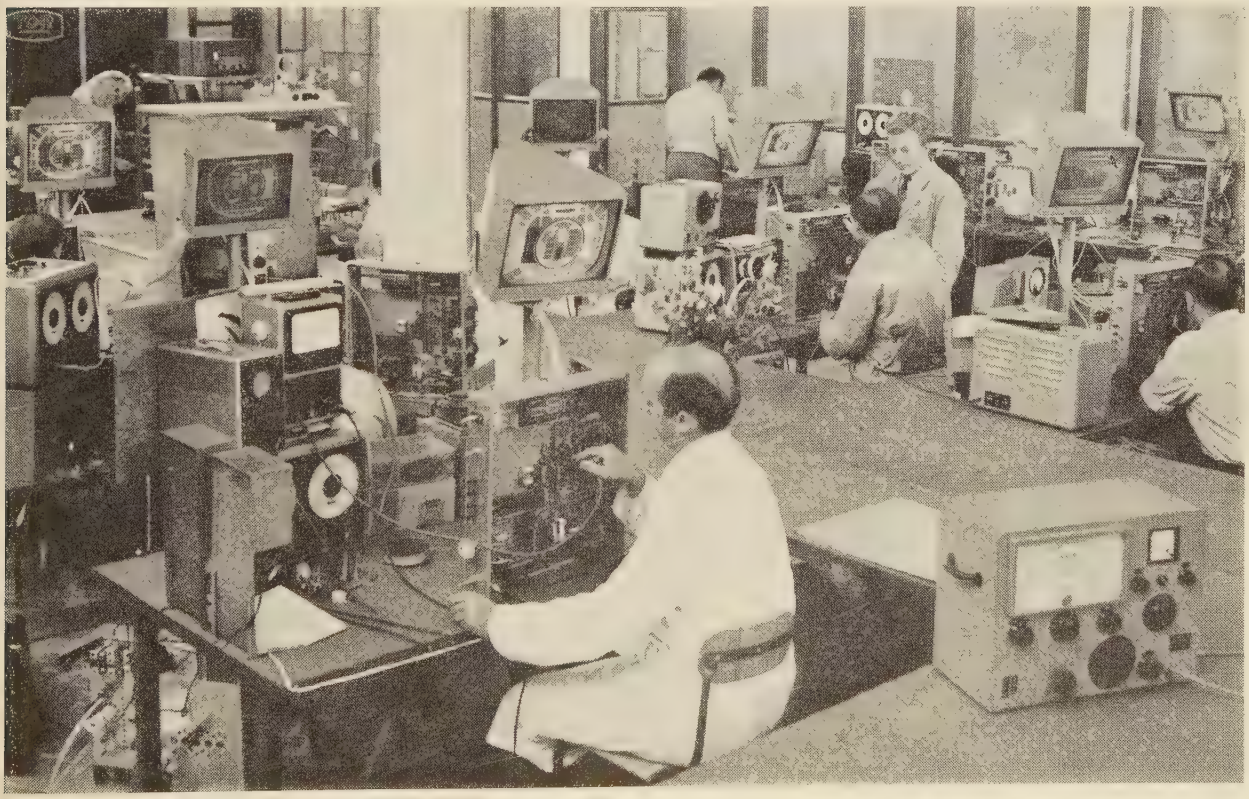
A Rapid Development

The last war gave extra impetus to the development of a long range of the components required for modern sound transmission and reception. And alongside the original radio industry today we have a number of firms which make, branch by branch, medical apparatus, heart-measuring equipment, control and analyzing equipment, and automatic regulators. These specialized products are now important export lines, sold today in practically every part of the world. And with these exports we are at the heart of something vital in modern trade, where men of vision are strongly advocating that individual countries should sell their specialized know-how.

Few people now could imagine life without television. In Denmark it is reckoned that half the population are able to watch television. The number is growing fast. In 1956 there were just over 30,000 licensed viewers. This year, which has seen a big radio and television show in Copenhagen, the number is 650,000: experience shows that exhibitions of this kind generally result in many more viewers.

Parts for Radio Industry

There is also a rapid development in sound radio, which has undergone such enormous improvements in quality that it can hardly be bettered. The sound reproduction is as near to perfection as it is possible to get and future development will aim at making rooms give the best effect that radio provides. The transistor set is making great strides and showing equally good sales results. And in the new sound reproducer, the tape recorder, useful industrially and for recreation, the Danish industry has also found an export line.



Testing a television picture screen

From a Danish component factory which makes the largest group of radio and television parts for export

One reason why complete television and radio sets are not exported is the policy of tariffs which still prevails everywhere with regard to this industry. When it was found that the sets could not be sold, the reaction was to produce parts. The industry also embraces such things as echo-sounders for the fishing industry, safe navigation, etc., and these now form the greater part of all Danish radio exports to countries in Europe, America, and Asia. Further, the industry makes automatic transmitters and special receivers, as well as resistors, induction coils, and pupin coils, to mention only a few of the requirements of modern telecommunications—in which Denmark has a fine international reputation.

Research Work

Another export line is hearing aids and components. Some specialized factories produce closed TV circuits for controlling certain production processes, such as pressure measurement at power stations, etc. The joint-European atomic reactor in Norway is equipped with Danish-made television as part of the safety arrangements. A curiosity worth mentioning is the fact that the loudspeaker equipment at United Nations headquarters is Danish-made. It is not only the technically advanced countries which import the radio industry's products. Development countries, if they are to accelerate their development, must have the best technical aids; this, no doubt, is one reason why Danish exports to Asia last year (of over 153 million kroner) showed an increase of 37 per cent on the year before.

The first fully transistorized walkie-talkie with transmitter and receiver in one, designed by Danish engineers

The tremendous export expansion of the Danish radio industry during the last 4–5 years is partly explained by the research that is carried out and the training that is laid down for personnel. The Radiotechnical Research Laboratory is engaged on current problems of the whole radio industry. For example, in recent years it has conducted continuous tests on the applicability of transistors in radio technology and television sets, equipment construction, defence problems, etc. An individual firm may request trials at the laboratory, and examples could be named of firms which have made such requests —and paid for the tests—and then made the results available to the industry as a whole.

This is true of research on single aerial equipment for FM and TV reception. Other research is concerned with the distortion of television signals caused by aircraft. Recent research—organized in association with the medical profession—has established that radiation during the manufacture of television sets is so low that it is without significance to health.

New Constructions

This kind of laboratory has been of great importance to the industry in enabling it

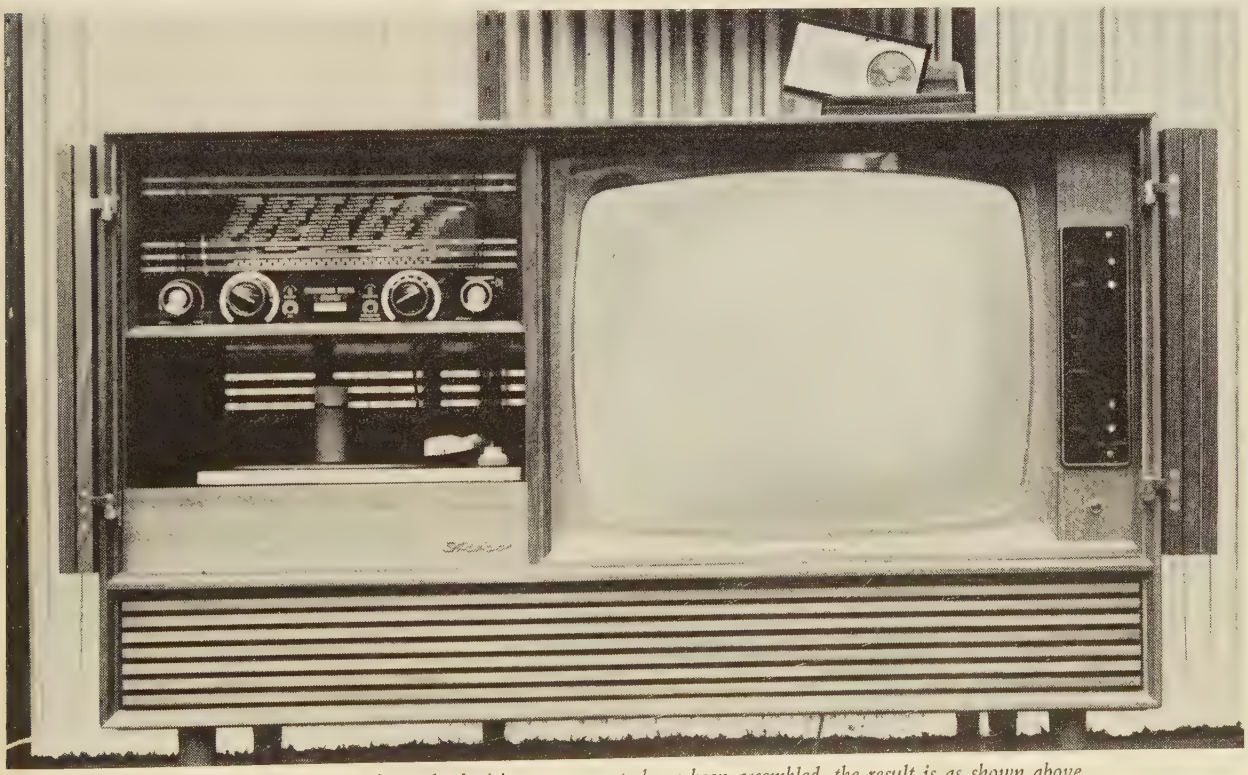
to make steady progress in fields like high fidelity, stereo, and echo. The last-named has been easily the year's biggest 'consumer novelty' in connection with the Copenhagen Radio and Television Show, where echo units combined with stereo amplifiers were shown—a device which makes it possible to 'move the concert hall into the drawing-room'. Work on transistors has been of particular importance to the industries which have this year been able to present fully transistorized industrial television or military walkie-talkies—another important export line.

In a wide range of more technical departments important new constructions have come forward this year. They include an impedance meter for precision measuring over a large frequency and impedance; a rectangular generator with a large frequency area and a very small rising time; a capacity generator for rapid grading of small capacities, for example for ceramic condensers; a modulation meter for precision measuring of amplitude and frequency modulation; and a tube analyzer for exact measuring of the data of electron tubes.

The radio show provided a massive display of every product naturally connected with the planning programmes of the radio, television, and gramophone industry and of electronic equipment generally. Everything belonging to the industry was there, from the smallest part at the joint stands of the component makers to complicated equipment which included apparatus that recalled the vital contribution of electronics to space research and radio-astronomy, enabling us to pick up radio waves from space and share in the whole strange and fascinating 'cosmic radio play'.

With the vigorous expansion in exports the radio industry—one of the industries that it was predicted would suffer in a larger market—is well equipped for the future. The expansion has continued into the present year, as the figures for the first quarter indicate. They are over 30 per cent higher than the corresponding figures of last year. All this is the result of the industry's ability to cooperate on joint research and turn the available raw materials to good account, to highly trained and skilled technicians, and to a managerial personnel whose qualifications are well known after nearly 40 years of effort spent in establishing this side of the work on a sound foundation.

Automatic assembly of components: these are placed on the printed circuit and soldering then takes place by means of a fully automatic soldering machine



When the various radio and television components have been assembled, the result is as shown above

Exports from the Village

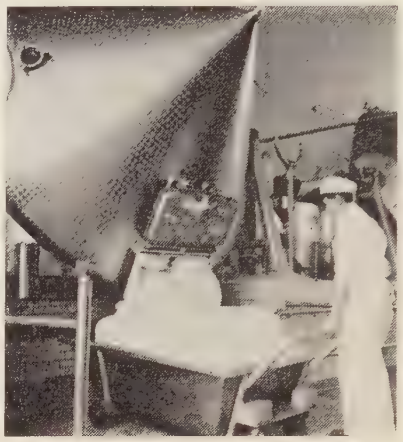
By Jørgen Søholt Christensen

The Danish village is the centre of general farm production of milk, cheese, butter, pigs, cows and calves, eggs, poultry, and other commodities. New demands are being made on it and a Commission appointed by the Minister of Agriculture is studying the agricultural industry in all its aspects

'Structural rationalization' is a term widely employed in Danish agricultural debates. 'The present-day need is for large-scale farming: only large farms can utilize modern techniques.' So runs the argument in favour of repealing or amending a law that prohibits the amalgamation of farm holdings. There is general agreement that many farms are really too small. The problem is to find the right margin.

There are 93,000 holdings in Denmark with less than 10 hectares (24.7 acres). This is close on half of the total number of Danish farms.

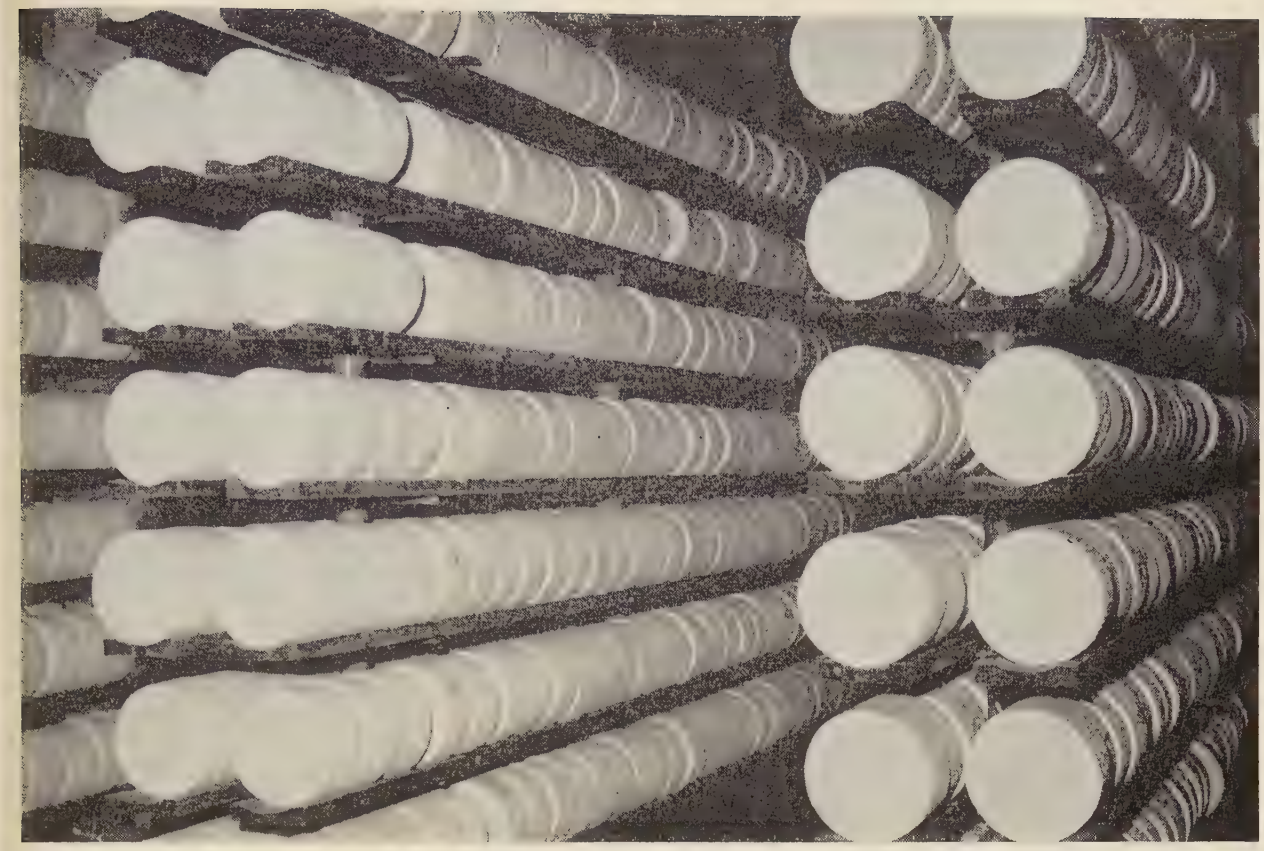
It would be in accordance with liberal farming traditions to leave developments to themselves, only the current possibility of joining the European Common Market (the Six) exerts a degree of pressure owing to the prospect of an appreciable increase in grain prices, which small farms having to purchase grain would have difficulty in facing. These problems are now being discussed by an Agricultural Commission appointed by the Minister, Mr. Karl Skytte.



Steel vats at a Danish dairy

Grain has previously led to reforms and even revolutions, which have rapidly changed the face of Danish farming. In the 1880s—as the saying goes—the bottom fell out of the grain market. Farmers found themselves with an abundance of grain which they could not sell. The result was a crisis which remained more or less acute for a period of some ten yeras, and Denmark emerged from it with the foundations of an entirely new agricultural structure. By an intense effort which has since been rewarded, the conversion to the production of processed foods was carried out. This took place at a time when the agricultural Cooperative

The Danish village, with large and small farms side by side, still exists



Rows of cheeses being matured

Movement had begun to develop, and without the fellowship of production and marketing on which this movement is based it would perhaps never have succeeded.

A Danish Speciality

About a hundred years earlier another agricultural reform had been started, with to some extent the opposite aim. Up to then the farmers had lived in villages, where thatched cottages and farms had stood close together, but now they moved out of the village community into the fields, which at the same time were more rationally distributed. (A few of the old villages have survived.)

In Denmark, therefore, 'village' has a wider connotation than it has in many other countries, particularly in central Europe. A Danish farmer will say that he lives in such-and-such a village, but he may have half a kilometre or more to his nearest neighbour and several kilometres to the village store or Co-op. There may be farms on the *outskirts* of the village, but the core is the church, the village hall, the school, a few shops, the inn, the dairy, perhaps the doctor's or veterinary surgeon's house, and the houses of shopkeepers, the teacher (or teachers), and farmers who have been succeeded on the land by the next generation. The roads are asphalted and no cows are driven to and from the fields on them. Fronting the houses are gardens, which the occupiers will usually plant with roses.

From a Danish bacon factory: from raw material to canned goods

The village hall is a Danish speciality, which originated at the same time as the folk high schools. In the nineteenth century the latter made the farmers politically and culturally conscious, and when young farm men and women returned from a course at one of these schools they wanted a place where they could meet for discussions and lectures. So they clubbed together and erected a building with a large hall. There they were able to dance and hold parties, and there would often be a built-in stage for play performances.

Farmers' Unions

The Danish farmer has been called a Cooperative farmer, but that does not stop him from being an individualist—or many private firms from trading in agricultural products. Often, however, the farmer buys and sells his goods through a Cooperative society of which he is a member. He belongs, first of all, to the Cooperative dairy and bacon factory, but there are many other associations to which he belongs directly or indirectly, including, for example, cattle, meat, egg, poul-

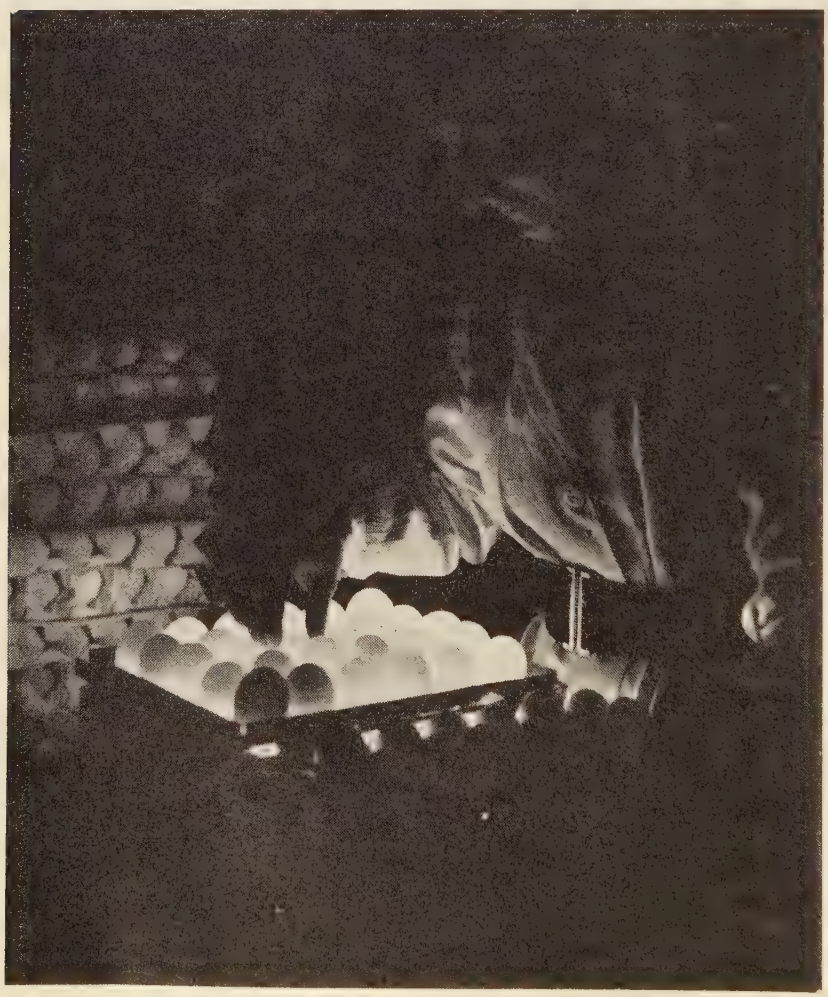
try, and potato export organizations, various purchasing societies, Cooperative stores, and so on. He is also a member of a milk-recording society, which is a local association employing trained specialists to check milk yields by means of samples and so to arrive at the most economic herds. He also belongs to trade organizations, all according to the size of his holding. Medium-sized farmers are organized in farmers' unions (128,500 members), smallholders in smallholders' unions (103,000 members), and large farmers in estate-holders' societies (1,500 members). Each of these has advisory officers who supply the members with advice about farming methods and techniques. The farmers' unions and smallholders' societies also have sections for farmers' wives.

All-round Production

General farming is the rule in Denmark. Each farm produces milk, pigs, calves, meat, eggs, grain, beet, potatoes, poultry, and so on.

Let us take an important article like milk and follow its course to the counter in the British shop. Early in the morning it is collected from the farm and taken to the dairy, which usually produces butter and cheese. The export butter (two-thirds of the production) is assembled from the approximately 1,200 dairies (there used to be one for every parish, but the industry is being rationalized by means of amalgamations) at central depots. From there it is immediately despatched by sea or rail to the customer country, a few days after being churned. The actual marketing is organized by the joint Butter Export Board, which also comprises commercial butter exporters, and which each week fixes provisional opening prices in the large British market.

Fellowship at the bottom and at the top is the principle of production and marketing, and this is seen again and again in Danish farming. Each group of commodities has its export board (nine in all, covering both the Cooperative and the commercial trades, and the nine boards are represented in turn on the joint body, the Agricultural Council, which looks after the political and commercial interests of agriculture. The Cooperatives and the National Federation of Farmers' Unions are also represented on the Agricultural Council by nine members each, while the smallholders remain independent. The President of the Council is Mr. Anders Andersen, Member of the Folketing.



Every egg is candled at the packing station so that internal blemishes can be detected

Structural Changes

A new feature of agricultural life, which is helping to intensify the debate on the structure of agriculture, is the rationalization and to some extent specialization that has taken place recently. Dairies, as stated, are being amalgamated. (As a parallel development, small village schools are giving way to large central schools taking children from several parishes and providing facilities for examinations.) Some of the large new dairies will specialize in butter production, others in cheese. An extra-large dairy of a rather special character has been established in South Jutland, producing liquid milk for the American forces in Germany.

Some farmers no longer keep cattle. Others specialize in poultry or egg production, and others again concentrate on expensive seed crops. At ten places so far farmers have established Cooperative cattle sheds with a permanently employed staff of cowmen. This development has been partly engendered by the phenomenon, familiar to most countries, of the

drift of population from the country to the towns. Thousands of young people have left the land, attracted by shorter hours and the easier and perhaps better-paid work in the towns.

Big Demands on the Farmer

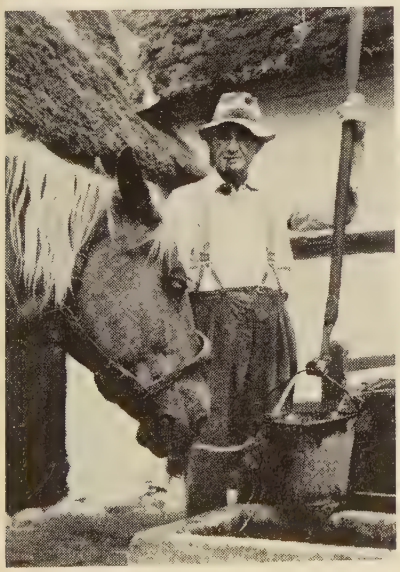
If agricultural production nevertheless has expanded, the reasons are that mechanization has compensated for the loss of manpower and that research and experiments have given good results in the shape of new crops and new methods in animal husbandry. The demands made on the farmer have grown at the same time. Success today presupposes good training, and more and more young people are getting their practical farm training supplemented by theoretical training at agricultural colleges.

The domestic stimulus to reform is thus present, and the development towards a new structure is taking place. Some 20,000 small farms that are too small seem doomed to abolition, so that the land can be combined with other holdings to give a convenient size. They are mainly properties whose owners are more or less forced to live on other earnings than their holdings can provide.

The Mechanical Aids

At the same time new mechanical aids are appearing that are within the means of smallish, intensively farmed holdings—both tractors and combines. One hears of farmers and smallholders who purchase costly machinery jointly, and active support may be found in the machine pools which provide both labour and machines for all field operations. In a year or so's time news will be heard from the Agricultural Commission. Its report, which will deal with all matters of importance to agriculture, is awaited with the utmost interest.

It may form the basis of a third revolutionary change in Danish farming.



Back home from the field

Tractors have taken the place of horses for harvesting: in the background is a typical village church

Food Campaign in Manchester

In the presence of representatives of Danish dairies, bacon factories, and poultry farmers, the Prime Minister, Mr. Viggo Kampmann, launched in Manchester a new campaign for Danish foods in the United Kingdom.

The Manchester exhibition and the intensive campaign to promote Danish agricultural products launched simultaneously on radio and television and in the press, made a big impression upon the city.

Manchester is already one of the places in Great Britain where Danish farm products are most highly reputed. About 700 provision stores have joined in a publicity drive, while Danish food products and posters are being displayed prominently in a great number of shops.

Before the opening ceremony, Mr. Kampmann and the Danish Ambassador to the United Kingdom, Mr. Nils Svenningsen, paid a visit to the Lord Mayor of Manchester.

DANISH FOREIGN OFFICE JOURNAL

Published by the Ministry of Foreign Affairs. Distributed through Denmark's Diplomatic and Consular representatives to interested firms, trade associations, authorities, the Press, etc.

RESPONSIBLE EDITOR:
CHIEF OF THE PRESS DEPARTMENT OF THE MINISTRY OF FOREIGN AFFAIRS
Christiansborg, Copenhagen K.

ADVERTISEMENTS:
DANSK BLADFORLAG,
Amaliegade 22, Copenhagen K

PRINTERS:
J. H. SCHULTZ A/S,
UNIVERSITETS-BOGTRYKKERI,
COPENHAGEN

SUBSCRIPTIONS:
J. H. SCHULTZ BOGHANDEL,
Havnegade 15, Copenhagen K

Price Kr. 8 a year post-free, issued quarterly. Single copies Kr. 2.50. All correspondence regarding subscriptions to be addressed to:

J. H. Schultz Boghandel,
Havnegade 15, Copenhagen K

Art on Rolls

By Sven Hauerbach, Editor

Since 1945 the Danish wallpaper industry has developed rapidly, thanks to close collaboration with artists, who in patterns and colours have succeeded in expressing Danish taste and tradition

'Candlesticks', a cheerful and up-to-date wallpaper, designed by Ib Buch

It is often said that 'the cradle of modern wallpaper stood in Denmark, because artistic design of wallpaper originated there'.

Some of the reasons for this international reputation, ranking with that of Danish silver, porcelain, furniture and textiles, will be explained in this article. Artistic wallpaper has a long tradition in Denmark where the wallpaper industry enjoys the advantages of close proximity to neighbouring papermaking countries and access to domestic ink production of high quality, combined with modern artistic design and high-class workmanship of universal appeal which can compete with foreign mass production.

Wallpaper has been made in Denmark since 1826, when the Copenhagen miniature painter Liepmann Franckel began to produce it. Now there are seven factories, with a combined annual production of about 130 million metres. Each year they issue collections of over 5,000 different new designs, including 300 in plain colours.

It is estimated that 85 per cent of all homes are papered, and to understand the background to such popularity we must take a quick look at the past history of wallpaper...

When the printing machine came in about 1870 it rapidly asserted itself and displaced the fine hand-printed landscape wallpapers. By that time paper had become universal as a covering for walls and the machines released an ever-growing flow of it on to the market. Competition led to the industrialization of patterns at the expense of artistic wallpaper, which was more time-consuming. Patterns in great variety and cheapness became general and artists were no longer required. The Danish factories had to fall into line with the makers of cheap wallpapers in order to compete.

Functionalism in the early 1930s brought a change, but when it soon degenerated into exaggerated forms there was a public reaction. Then came a period of plain colours lasting until the war, which stopped imports of rollers and restricted the import of paper.

Applied Art Products

The Danish factories had to rely on their own resources, a fact which was eventually to prove beneficial. There was a revival of interest in screen-printed wallpaper.

Realizing that what was needed just then was an applied art production which would reflect national taste and tradition, the manufacturers approached a number of well-known Danish painters, designers, and draughtsmen, who in large-scale competitions were encouraged to take an interest in creating new wallpaper patterns—*Danish* patterns. The only drawback to screen-printed wallpapers was the price, which was rather high compared with that of machine-printed wallpapers. However, the artist-designed wallpapers proved a great success; so great that just after the war they were shown round the world at exhibitions. In the United States they attracted great attention at the American Institute of Decorators' show, where some of them gained awards, among them Bent Karlby's handsome 'Acanthus', which won the first prize.

With the return of normal conditions it was seen that the artist-designed wallpapers had come to stay, only now it was no longer a question of screen-printed

The painter Gunnar Aagaard Andersen creating his 'tachist' wallpaper. the flow of colour being regulated by his finger on the hole in the bottom of the pail as the roller turns

Eva and Niels Koppel designed this decorative wallpaper, which they call 'Cosmat'

products but of rotary-printed wallpapers. Both the industry as a whole and individual firms organized new competitions for the best designs by Danish artists and well-known 'names' such as the sculptor Boman Utzon Frank, the architect Professor Arne Jacobsen, the architect Bent Karlby, the draughtsmen Ib Andersen, Rolf Middelboe, and Sikker Hansen, a well as many others, supplied a growing selection of successive patterns of high quality.

Experimental Lines

Today the artist-designed wallpapers are more popular than ever. The artists revel in all sorts of designs from strictly naturalistic flower patterns to abstract figure compositions.

Factories and artists are seeking new paths and are everywhere experimenting. An interesting innovation is the wallpaper called *tachist*, designed by the painter Gunnar Aagaard Andersen. The artist has described it as follows: 'Instead of using pattern rollers I work direct with a wallpaper machine: like an endless band of monotypes, one might say. It is a work of movement—the machine's and the body's. The machine runs with the patch and the line, repeating it more and more faintly, adding new patches and lines which give way in turn to the impression produced by my movements and those of the machine—our joint work.'

One can either paper a single length from ceiling to floor, or a strip can be put up in two levels like the well-known Japanese silk paintings, which the *tachist*-printed wallpaper is not unlike in effect and rhythmical expression.

First Exports

Notable among other experimental innovations are the papers designed by the architects Mogens Hammer and Henry Moldenhower in collaboration with the photographer Keld Helmer Petersen. The trio have employed photographs of branches, which they have manipulated so as to leave only a pattern effect. It is impossible to see that a naturalistic photograph was the basis.

Thus work is being done on many fronts to renew the applied art products of the Danish wallpaper industry, and the efforts have borne fruit. As already mentioned, Danish wallpapers attracted international attention just after the war, and since then a considerable export business has been done.

Sweden and Switzerland were the first customers to come forward, but other countries, too, showed a demand for Danish wallpaper, though to a lesser extent.

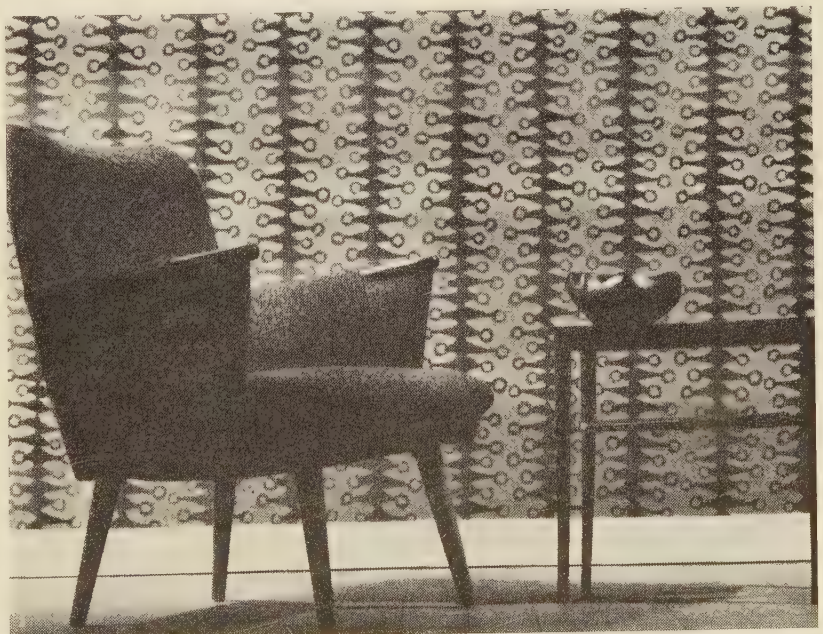
Countries like Britain and Norway were still subject to import restrictions, but inquiries from the United States, Australia, South Africa, and a number of European countries resulted in export orders on some scale.

With Denmark's entry into the European Free Trade Area (EFTA) in 1960 the British tariffs were removed and Danish wallpaper has since found a large market in Britain.

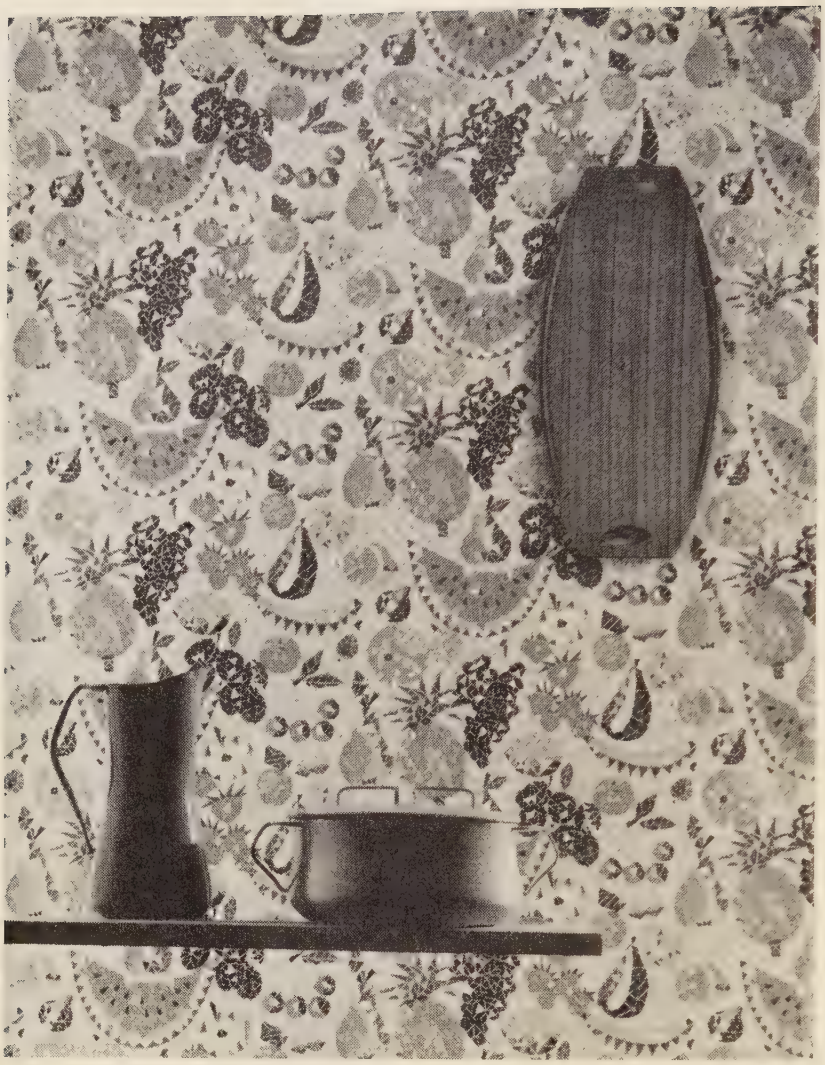
The interest in Danish wallpaper is due, as already indicated, to the artistically designed patterns by Danish artists, but it has been shown that the patterns do not have to be Danish: foreign patterns with the specifically Danish colouring (that is, colour range and composition in the modern scale) have also been good sellers abroad. There is a growing international interest in Danish furniture design and Danish textiles and it is natural that wall coverings in rooms containing them should harmonize. That is where Danish wallpapers come in.

Papered Kitchens Fashionable

A separate chapter is formed by the plastic-treated kitchen papers which in their present style are becoming increasingly popular, a fact also connected with the many small modern homes which have dining-recesses. No doubt the



A design by Hanne Smith called 'Rhythm' which won an award in an international wallpaper competition held in Paris



'Cornucopia', designed by Bent Karlby, has a gay mosaic pattern which makes it suitable for use in rooms and kitchens, and on staircases

artists originally thought that there was a need of some decorative comfort in bare kitchens, and so they provided gay patterns which included gastronomical and culinary designs. Papered kitchens became the fashion in Denmark, especially when it was found that wallpaper tolerated steam and smoke almost better than distempered walls and was easy to clean. There is a large export demand for Danish kitchen wallpapers, which are available in a wide selection.

Nursery Wallpapers

Other specialities of Danish factories include nursery wallpapers. A few years ago factories and artists eagerly took up this new line. Children want fairy-tales on their walls and they must be serviceably 'bound in plastic', it was said. And so the artists supplied fine designs, the factories printed them, the dealers bought them—but the children did not share their enthusiasm. The designs were just too good; children want simple and easily understand themes and the collection turned out to be a poor seller. So the artists adjusted their style and drew teddy-bears and circuses and menageries, and now the papers sell like hot cakes. Incidentally, one firm successfully introduced an educational road-safety wallpaper.

Changing Fashions

As new wallpapers have appeared this year—the collections change in Denmark every other year—it is worthwhile mentioning the novelties. A number of general points may be noted. An interesting fact is that after a longish interval floral wallpapers are beginning to reappear in the pattern books. It is noteworthy, also, that intense colours are now being used—the dark ox-blood paper is partly out of print—and the colours generally are both purer and more vivid. Grey-toned papers are, however, still in the majority. The abstract patterns are still in, but many new ones have been added with a discreetly textural and 'woven' effect.

Whereas patterned wallpapers previously had only two or three colours there are now four or five, and various shades of the same colour are employed. In the previous collection the ground was frequently a colour only, but now there is commonly, in addition to the colour, some form of effect such as tiny curved lines, dots, and so on. The production process is clearly more expensive in the new collection—an extra overprint will always increase the cost—but one notes with satisfaction that the selling price is on the whole the same as in 1959. A new fashion, incidentally, is indicated by a series of wallpapers made from sawdust paper with a napped surface which gives a quite unusual effect.

100-per-cent Washable

A few Danish factories have some entirely new types of paper in their collections, types which after prolonged laboratory experiments have been confidently proclaimed 100-per-cent washable. They are, of course, specially suited for halls, kitchens, nurseries, stairs, hospital corridors, and other places where frequent washing may be necessary. These washable types will all stand common cleaning materials such as petrol (gasoline), detergents, ammonia water, tetrachloride, and so on.

It is interesting, too, to see that there are considerably more period wallpapers —Regency, Rococo, Renaissance, etc.— than formerly. They are more subtle and of better quality than these used to be. In kitchen papers the trend is towards less figured patterns, resulting in a cosier and more intimate effect. The 1961 collection has a larger choice of plain-coloured papers, and these have been classified in the sample books with a view to colour combinations.

For those who cannot afford to line their bathrooms with expensive tiles there is a neat and cheap compromise: special tile-pattern wallpaper in many delightful pastel colours coated with a thick layer of glossy plastic. It has become fashionable in both old and new homes to paper the ceilings of small rooms and halls, and specially adapted ceiling papers have been produced. Finally, it should be mentioned that there are now plenty of wallpapers of the same pattern in many variations of colour.

It is a source of satisfaction to the Danish wallpaper industry that it occupies a leading position in modern wallpapers, and as the above will have shown it is constantly engaged in developing new designs and new methods of production.

From Silk to Nylons

By Aksel Bro Rasmussen

Nylon stockings were not a Danish invention—but Danish firms were quick to see their export possibilities. The Danish textile industry has kept up with fashion trends while remaining competitive in price

Modern woman has been saved a lot of irritation by the technological advance made since the war by the stocking industry. It is perhaps true to say that there has been no greater improvements in clothing than those that have been made in ladies' stockings. Textile experts maintain that by intelligent buying a woman can keep herself as cheaply in stockings today as before the war, which is saying a good deal considering the price increases of many other daily needs.

It is the nylon stocking that has created the revolution. It has proved to be a good deal stronger than the old stockings of rayon and silk, which have almost gone off the market since the introduction of nylon. A strong nylon stocking lasts a terribly long time—as the producer and salesman see it. It is only because the demand is for ever thinner and softer stockings that the consumer can still be annoyed because she has to throw away a stocking after a brief life. Against this it may be said that the modern woman now has a much smarter stocking than before. What —in a far coarser finish—was once a luxury for queens is now every woman's possession.

Bringing in Millions

Nylon stockings were not a Danish invention. But Danish firms were quick to see the export possibilities which lay in their production. And exports have developed astonishingly since the war. Through this thing of beauty the Danish Treasury has earned well over 100 million kroner in foreign currency, and besides the cash returns the industry has given employment to many hands.

The European market arrangements will undoubtedly mean sharp competition for the Danish manufacturers, but progressive rationalization has insulated the industry and there is a gratifying increase in the consumption of ladies' stockings. In 1953, for example, the Danish consumption was 8.6 pairs a year per female inhabitant, and it is now 11. In Britain, the United States, and Sweden the figure is 12 pairs. In Denmark, experts say, stockings are the biggest single item in a woman's clothing budget. There is food for thought in the fact that the Danish consumption of nylon stockings amounts to about 130 million kroner a year, compared with about 140 million spent on soap and a little more on coffee.

The Export Drive

The boom in the sale of nylon stockings by Danish firms started before 1950. The first were snapped up on the home market, but efficient exporters went to work and laid the foundations of the big sales that have become an established fact in the last 10 years. The excellent success was not won without a struggle. Intense competition has prevailed and at one time the market was flooded with cheap seamless stockings from other countries. At about the same time roughly a third of the capacity of the Danish factories was unexploited, not only because of the competition but because the success of seamless stockings had come as a complete surprise. A few years ago there was an excess capacity for the production of fully fashioned (seamed) stockings, while it was impossible to obtain enough machines for the seamless stockings, which are made on very different machines from those used for making fully fashioned ones. It costs investment capital to follow the vagaries of fashion. It is estimated that over 30 million kroner has been invested in machinery by the 16 Danish factories.

Danish nylons are exported to a wide range of countries. A survey by the textile manufacturers' association shows that exports were valued at 10.6 mill. kr. in 1952, 15.2 mill. kr. in 1953, 15.7 mill. kr. in 1954, 19.5 mill. kr. in 1955, 16.3 mill. kr. in 1956, 17.3 mill. kr. in 1957, 13.3 mill. kr. in 1958, 12.6 mill. kr. in 1959, and about 10.6 mill. kr. in 1960. The figures are affected by international economic trends, unsettled conditions in some countries, and—not least—fashion. With the appearance of seamless stockings exports fell, as the figures for 1957 and 1958 show.

From the bording department, where stockings are moulded by steam pressure

Inspecting the yarn to ensure that it has been twisted a sufficient number of times

Drawbacks of Nylon

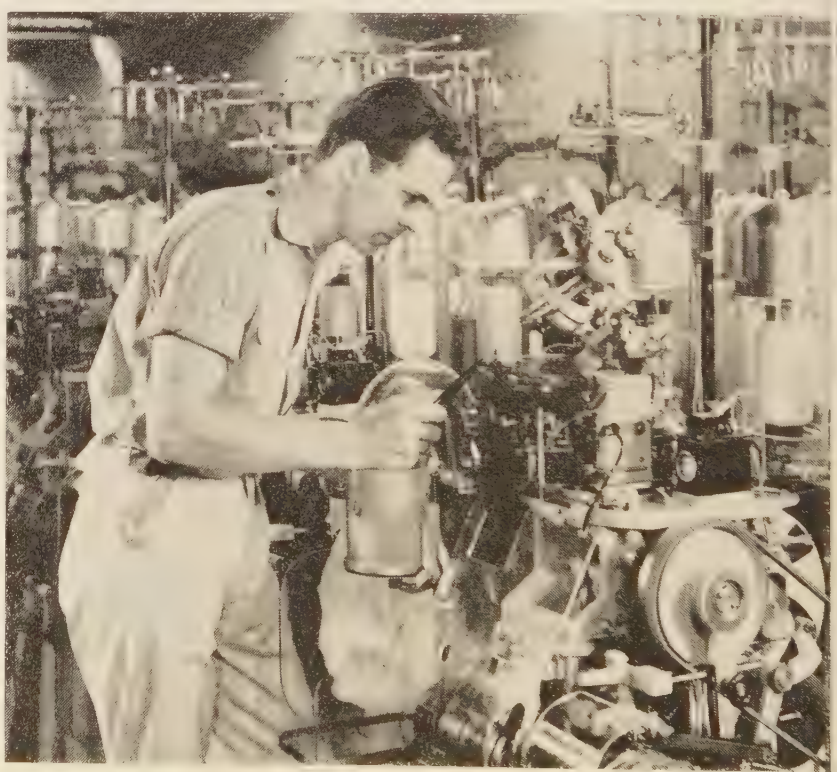
The manufacture of nylon stockings requires a highly complicated productive apparatus with many costly machines. But it must be added that not even the finest equipment can remedy the drawbacks inherent to nylon. For example, nylon is not light-proof but turns dark in the sun and so is not improved by being displayed in strong light. Nylon also melts at 130° C and so will not tolerate pressing with a hot iron. Many women have learnt this too late. On the other hand, nylon will stretch better and wear longer than any other material. The Danish textile manufacturers' association have recently published a booklet giving advice and guidance on nylon stockings. In this they say that party stockings are unsuitable for walking out in. For a really strong stocking one should choose one of heavy yarn and small mesh. The heaviness is expressed in denier and the closeness of mesh in gauges. For walking out one should choose 10, 12, or 15 denier. And the yarn should be multi-filament, for then a broken thread will not cause laddering. For walking one can also use twisted yarn, in which, for example, two 20-denier yarnes are twisted together.

A Good Example

Fully fashioned stockings wear better than seamless ones, which are knitted round a tube and pressed into shape. But of course it is pleasant to be free from the bother of ensuring that the seam is straight down the back. This may be the real reason for the success of seamless stockings.

The Danish textile industry was fairly quick in adapting itself to customer requirements, without sacrificing productivity and competitive prices. A typical example of the ability to seize opportunities and adjust itself to changing markets and fashions may be found in a nylon stocking factory north of Copenhagen which has a turnover of millions. It was started after the war with enterprise and Marshall aid, was successful, and has proliferated. Subsidiaries have been established in Common Market and EFTA countries, and the cooperation between these factories is an interesting proof that it is possible to realize the dream of common European endeavour.

The factories work together in an atmosphere of mutual inspiration, exchanging experience and ideas—an arrangement which in turn reduces the risk of errors in the introduction of technical and marketing improvements. Together the establishments employ well over 1,000 people, and there is a constant interchange of personnel between them. Dutch workers are trained at the main factory near Copenhagen, the influence the other way being, of course, channelled chiefly through Danish instructors. The firm's management think it improbable that small and medium-sized firms in the stocking industry will be able to benefit from the fresh breeze that will blow with the developing European marketing arrangements. On the contrary, they believe that the ability to compete in this industry will be confined to businesses which have the advantages of large-scale production—and they are therefore endeavouring to ensure them. They also believe that if Denmark joins the Common Market, this may result in a radical simplification of production with consequent increasing competitive ability.



Production of the fashionable seamless stockings

BOOK SHELF

Everyman's Andersen

Hans Christian Andersen: Fairy Tales and Stories. Translated with an Introduction by Reginald Spink. Illustrations reproduced from paper cuts by Hans Christian Andersen. J. M. Dent & Sons Ltd., London; E. P. Dutton & Co. Inc., New York, 1960. xvi + 416 pp., cloth. (Everyman's Library). 11s 6d, $ 1.85.

Two years ago we were able in this journal to review Reginald Spink's selection of 26 fairy tales, newly translated for the above publishers' series The Illustrated Children's Classics—a sixth of the accepted canon of 156 fairy tales and stories, and of course the sixth that is best known and most popular especially among children in Britain, America, and elsewhere. Mr. Spink's fine work has been continued and we now have a new selection twice as large and intended for adult readers, but including all of the 26 first translated tales in the 51 of the new book.

Among the newcomers are major Andersen works like 'The Bell', in which he embraces a philosophy of Nature; 'The Shadow', in which his most despairing pessimism finds vent in an entirely logical and neatly turned story; and 'The Story of a Mother', of which another great Danish author has said that Andersen in this legend 'moves like a somnambulist right out to an horizon of omniscience; at certain moments one scarcely believes it is any longer a mortal man who speaks' (Jacob Paludan in the essay '*Højdepunkter*'—Climaxes). Mr. Spink also has room for the tiny satire in two pages, 'The Drop of Water', the long early fairy tale 'The Travelling Companion', the futuristic fantasy 'In Thousands of Years' Time', and many other good things, besides one or two items which an Andersenian would have omitted, even from so large a selection, for his own favourites.

A brief but excellent introduction and short, useful notes enhance the value of the book. So, too, do the illustrations, reproduced from Andersen originals; it is well known that Andersen had some minor talents for paper-cutting, drawing, etc., and made a number of amusing and skilful silhouettes, which have no connection with the concrete subjects of the fairy tales but which have previously been used as illustrations (often better reproduced and distributed than here). They are more welcome than many of the horrid illustrations which yearly see the light in various countries.

As far as we can judge, Mr. Spink is able to do justice to this larger and—as the title indicates—more all-round selection in the same way as the smaller selection. His acute appreciation of the many nuances in Andersen's individual Danish and his own power of expression enable him to follow the originals on the high level as on the homely. There is reason to rejoice that he has been given this opportunity and that the book has been included in a series like the Everyman's. A Children's Classic may be well qualified to improve the position of the Danish fairy-tale writer in the milieu where he has long been established, the children's. But the constantly reiterated Danish statement that Andersen wanted to be—and indeed is—a writer for the mature reader, by virtue of the very same tales which fascinate children, is of course better emphasized by a larger book for Everyman, and we wish the translator and publishers every success in its distribution.

Erik Dal

Light on Danish History

A History of the Kingdom of Denmark. Høst & Søn, Copenhagen, 1960

To most of us the darkness of Danish history is illuminated by little more than a couple of anecdotes. King Canute of Denmark and England showed his flattering courtiers that he did not command the waves and thus became a Great King. At Copenhagen eight hundred years later Nelson put his telescope to his blind eye, ignored an order and went on fighting the Danes. After that he sent them a letter calling them the Brothers of Englishmen.

Nelson's view is one all of us accept; happily we do not feel the need to go on quarrelling with them to prove it. There is in any case the fact that in the year 900 A.D. one inhabitant in four in England was Danish or of Danish descent. But the long stretch between the Viking era which culminated in Canute and the unhappy affair at Copenhagen is to most of us almost a historical vacuum.

The reason for this, says Palle Lauring, is that after Canute the two countries went their separate ways. England's way lay south and westwards, reaching out further and further into the great oceans. Denmark's way lay more to the east and north. Why Denmark should look more eastwards appears from the opening chapters of this fascinating book. As Scandinavia emerged from the Ice Age, what is now Sweden was cut in two through the line of the great lakes, and the lower part, now Scania, was joined to Denmark. Thus geographically as well as historically the southern part of present-day Sweden was Danish. And it might perhaps still have been so if all the Danish kings had had the political wisdom of Canute. Unhappily, they exploited the situation which gave them command of both sides of the entrance to the Baltic, exacting dues from all ships passing through.

This went on for four and a half centuries and so irked the maritime powers concerned (for the Sound was one of Europe's busiest channels) that when in 1658 the Swedes had Denmark at their mercy and demanded the permanent cession of the Scanian provinces as the price of peace, no-one was moved to go to Denmark's aid. The maritime powers preferred to have control of the Sound divided. This was forcibly demonstrated a few months later when the Swedes, in command of the eastern coast of the Sound, broke the peace treaty and once more had Denmark in their hands. But this time Holland, with the prospect of both sides of the Sound being in command of Sweden, switched her support to Denmark.

None the less the Sound and Great Belt dues continued to be levied by Denmark until 1857 when, in consideration for ceasing to levy them, Denmark was promised an all-time indemnity from the maritime powers of what at the present rates of exchange would be £20,000,000. Apparently two of the high contracting parties have still not paid in full, but, with Canute-like wisdom, Mr. Lauring does not say who they are.

If there is little of military glory in the history of Denmark after the Vikings, the story as Palle Lauring tells it makes fascinating reading. A country which once led the Scandinavian Union, ruled Norway for over 400 years, Iceland for over 500, and established colonies in Africa and the Caribbean, is now confined to the 500 islands which make up the Danish homeland, plus the Faroes and Greenland. But Denmark's glory lies in other fields. The shadow of the civilized Denmark of today, where 'few have too much, still fewer too little', stretches back to the Middle Ages, when Denmark was the first country to eradicate leprosy, and to 1802 when Denmark led the world in abandoning the slave trade.

Danish manufacturing skill developed late owing to the lack of power. 'Denmark is a low-lying country; her rivers seldom originate high enough to provide sufficient pressure to drive a reasonably hefty water-wheel, and water reserves are limited.'

If Danish rivers had flowed as freely as David Hohnen's excellent translation there would have been less difficulty. *A History of the Kingdom of Denmark* costs Kr. 34 in a paper back and Kr. 38 bound. So handsome a book deserves to have the extra Kr. 4 spent on it.

Roy Duffell

Industrialist and Idealist

By Ole Vinding

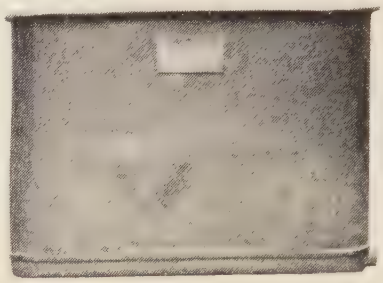
This year marks the 150th anniversary of the birth in Copenhagen of J. C. Jacobsen, the brewer. A child of his time, he had the wit to grasp the opportunities which the dawning industrial era offered. In setting up the Carlsberg Foundation, whose activities are both cultural and scientific, he put industry at the service of the Danish people

One hundred and fifty years ago—on September 2, 1811—a son, Jacob Christian Jacobsen, was born to Christen Jacobsen Nørkjær, brewer, and his wife, Caroline Frederikke Schelebeck. Their home was in Brolæggerstræde, Copenhagen, and there in all modesty stood Caroline Frederikke's wash tub, the cradle of the future Carlsberg Brewery, for it was in this that Jacob Christian successfully carried out some of his basic experiments in the brewing of beer.

In addition to his inherent ability and character, the new arrival had the good fortune to be born at the right moment. As the history of many great men shows, this is often a factor of decisive importance. Most great men seem to have come into the world at the very time when there was a need of their particular qualities. Exceptions to the rule show that outstanding ability and character, without the advantage of the right moment in time, can easily lead the richly endowed to a lifetime of martyrdom. This is a fact which a grateful posterity finds it all too easy to forget: after death the fortunate and the unfortunate are held in equally high esteem—the most posterity will do is to blame the great man's contemporaries for failing to recognise his greatness, overlooking the fact that in all eras, whether primitive or highly civilized, it has always been dangerous for the peculiarly gifted to be born too early.

Dawning Industrialization

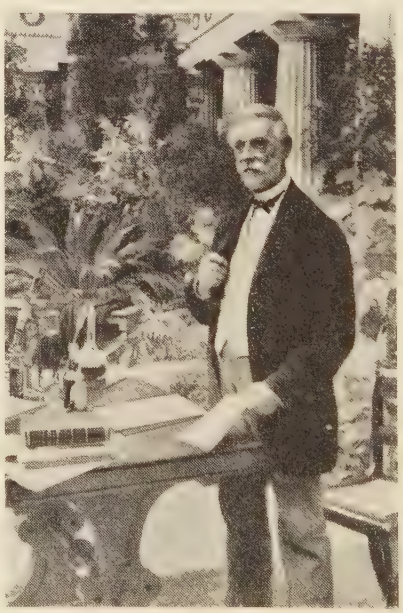
He was a child of his time, the age of the Middle Class. With the coming of the 19th century, the Upper Class had seen its influence sharply cut down—partly by the guillotine of the French Revolution, partly by social evolution—and it found itself forced to give way to the social class most capable of directing the advance of industrialization, the social class next in line. Trade had given this urban middle stratum the intellectual and economic qualifications which made them the natural successors to the bankrupt estate of the Absolute Monarchy and enabled them to develop modern society out of it.



The copper in which J. C. Jacobsen first brewed beer

Christen Jacobsen the brewer was an example of this development. As a young man he did not want merely to follow in his father's footsteps, so he left his parents' farm in Nørkjær, Vendsyssel, and made his way to Copenhagen, where he started as a labourer at Kongens Bryghus (the King's Brewery). Later he leased a brewery, became what was known as a tenant brewer and died owning the brewery, a well-set-up man, leaving his widow and son the establishment in Brolæggerstræde, a sound business and 11,000 Rigsdaler in cash.

This strong, energetic man managed to become a shareholder himself in Kongens Bryghus. He took pains to advance his further education. Of contemporary Copenhagen brewers, he was perhaps the only one to attend H. C. Ørsted's popular lectures on science, especially those concerned with chemistry. And he aroused his son's interest in science by taking him along too. Such an instrument as the thermometer was introduced into Brolæggerstræde before anywhere else, other brewers being content to dip their fingers into the vats to determine the temperature of the brew.



Painting of J. C. Jacobsen, founder of the Carlsberg Breweries, in Frederiksborg Museum

J. C. Jacobsen attended school until he was 14½ years old. During this short period he was top of his class and eminently fitted to further studies. But in the level of society he occupied studies stopped short at confirmation and lessons in the school of life had to begin. Brolæggerstræde, with its vats, its heavy beer wagons and its casks, was waiting. This was good fortune in disguise, for when in 1836 the father died, the son could carry on the business on his mother's behalf, finding in his day-to-day experiences a solid grounding for the work he was to do in the future.

Entry into Academic Circles

Through his wife, Laura Holst, daughter of a business man in Thisted (North Jutland), Jacobsen made contact with the intellectual and political life of the day. Young graduates from her circle, men such as Japetus Steenstrup, the Djørup brothers, Rasmus Nielsen and many others, were quick to accept 'the brewer fellow', who showed himself the possessor of considerable knowledge, a desire to acquire much more, and a personality and mind of his own. Since 1830 Jacobsen had been a member of 'Copenhagen's Civic Guard'. He had risen in the corps to the rank of Lieutenant and in 1848 to Captain, a title he always preferred to any other, apart from his professional designation: brewer.

With his university friends, Jacobsen joined the National-Liberal movement,

I. C. Jacobsen's (the Captain's) study, as it may be seen today in the Carlsberg Museum

and in 1843 he was one of thirty-four founder members of 'The Scandinavian Society', twenty-nine of whom were university men and only five tradesmen. In the same year he was elected to the Copenhagen City Council. These first entries into public life were the forerunners of a great number of positions of trust in nearly all enterprises of any consequence in Danish public life during the next forty years. It is somewhat surprising that a man as practical as J. C. Jacobsen, clear-thinking and far-sighted within his own profession, could subscribe to such a far-fetched and unrealistic policy as that of the National-Liberal party proved to be. In the same way as he clung to the rank of 'Captain' long after the Civic Guard had been disbanded, it must be regarded as a romantic 'failing' in a character otherwise wholly practical and rational. But the explanation, which is basically the explanation of all the activities of his public life, is to be found in the fact which Jacobsen himself frequently mentioned—that he lacked higher education.

Where his 'middle-class pride' was predominant, as for example in his membership of the City Council, his ideas were obviously bound to evolve in the direction of liberalism, whereas, as a member of the Folketing, the lower parliamentary chamber, and subsequently as a member, chosen by the King, of the Landsting, the upper chamber—in assemblies that is to say where his respect for authority constricted him—he proved more moderate, even markedly conservative. Equally obviously, a man with a character which his friends had no hesitation in describing as autocratic would find nothing in political life to develop or refine his personality. It could hardly fail to do otherwise than disappoint him deeply.

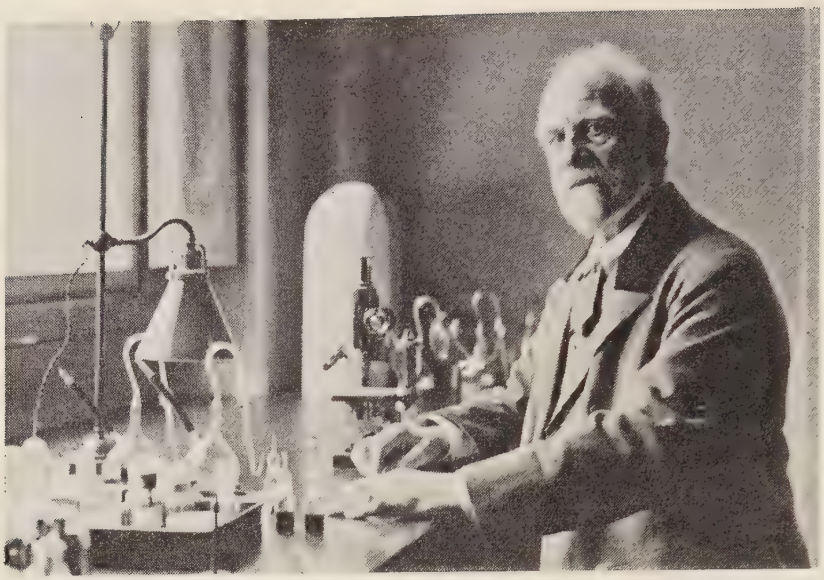
Significance of the Laboratory

No single detail in foreign methods of brewing escaped his notice. The yeast which was the secret of Bavarian beer he himself brought back to Denmark. Through his own reading he discovered the experiments with yeast in the production of wine which Pasteur had made. The respect in which he held learning caused him to appoint learned men to his staff. Carlsberg was forturate in that Emil Chr. Hansen, the research chemist, being the head of the Carlsberg Laboratory which was independent of the brewery, was free to experiment with his own method for the pure cultivation of yeast. True, his experiments were first opposed by the uncompromising 'Captain': Hansen's method was regarded as a presumptuous 'Lesson', a challenge to the genius—the authority— of Pasteur, a challenge which he, the autocrat, could not countenance. But Hansen would not give way. He was one of the very few who were on firm ground in correcting Jacobsen. But while other technical improvements were immediately introduced into Carlsberg, this the most important of all had to wait until the inner conflict between the authoritarian and the autocratic respecter of authority had been resolved.

Once this had been done, there were no limits to the successes registered by production at Carlsberg Brewery.

Success carried with it the means of bring-ing culture to the Danish people. Jacobsen's idea was that his colossal fortune should go to the community—not only during his lifetime but also after his death.

The Carlsberg Foundation was founded on the day when the monument to H. C. Ørsted, the teacher of his young man's days, was unveiled in the Ørsted Park. That day was September 25, 1876. As early as May that year J. C. Jacobsen had discussed the Foundation with his son, and from a letter to the Foundation written by the son after the father's death we know that the idea that the Foundation should inherit the brewery at Gammel Carlsberg was the son's. In this the son,



Professor Emil Christian Hansen, who in 1883 discovered a method for the pure cultivation of yeasts at the Carlsberg laboratories, a discovery which revolutionized brewing and made his name internationally known

the second Maecenas in this remarkable family of brewers, showed himself worthy of his father.

Bringing Culture to the Nation

The funds of the Carlsberg Foundation are devoted to science; but they also serve artistic and historical ends in the Museum of National History at Frederiksborg Castle. It is no exaggeration to say that in its lifetime the Foundation has been undertaking a national responsibility in the cultural life of the nation. At a time when Denmark was poor and battered by circumstance, the Foundation provided the nation with spiritual and intellectual support which was without parallel at the time. Nowadays there are such similar institutions as the Rockefeller and Ford Foundations, but, seen in perspective and taking everything into account, the Carlsberg Foundation can be fairly described as the fruit of the life work of one man unequalled in the history of European culture. This may be a big claim, but it is a fair one, and Denmark's gratitude to her son is self-evident.

But it was not immediately so. Jacobsen's manner, his 'despotic idealism', clashed violently with the increasing awareness and strength of the people. When, as part of the activities of the Foundation, the Frederiksborg Museum was founded, a liberal politician, Chresten Berg, remarked: 'The people could surely decide for themselves what museums they want and how they are to have them.' When Jacobsen, as the prime mover in the provision of new botanical gardens, suggested what seemed to him the most practical lay-out, opposition was again aroused. And when he wanted to decorate the foyer of the newly built Royal Theatre, this plan too ran into opposition. Sometimes his donations were received with irritation. For this reason he usually presented his gifts according to a plan backed by the necessary funds, so that all the State had to do was to say thank-you. But it was this very method of giving, made possible by the enormous industry he had built up, which roused irritation in the less well-off members of the countless committees amongst whom he found himself. As for the idea of bringing culture to the masses, the people felt strong enough not to tolerate any tutelage, even the most benevolent. And so his idealism frequently became a source of contention rather than of general satisfaction.

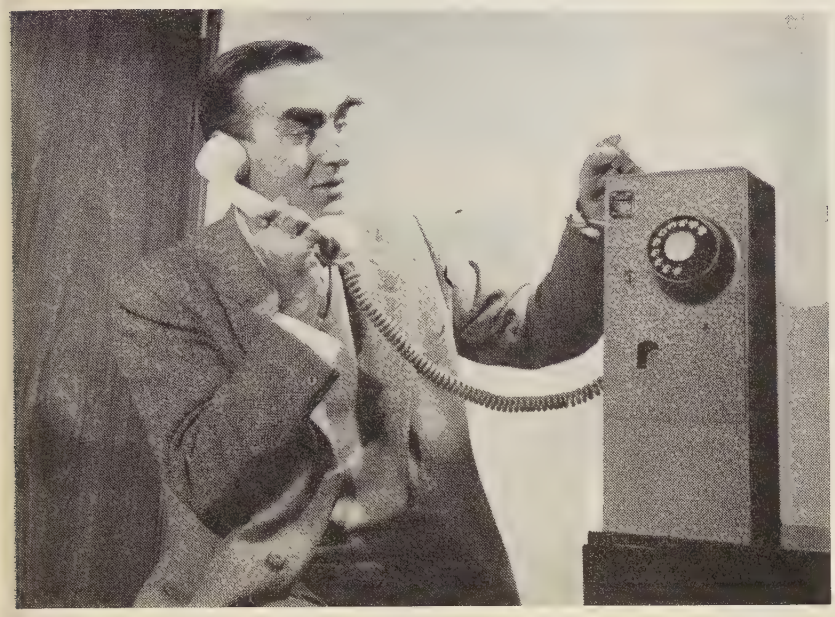
Nowadays we can look more dispassionately on this idealism—more dispassionately and more fairly.

And we see not only the abundant way in which it has borne fruit, we realise too that in the matter of idealism the judgment of the masses is not necessarily final. Jacobsen was accustomed to seeing his ideas evolve successfully. Through his own efforts at self-culture he had come to believe not only in the possibility of the dissemination of culture amongst the masses; he was also convinced that he knew better than the half educated and wholly uneducated classes. When he began to be contradicted on this essential point, his good fortune in having been born during the paternal and frugal era of Frederik VI began to be apparent. He had been born into a climate of opinion which favoured his development. In the succeeding era, of which he had caught a glimpse during the closing years of his life, things would have been different. He died on April 30, 1887, while visiting Rome.

Jacobsen's was such a big personality and so crystal clear that one thinks of it as among the most steadfast beacons we have in Denmark today which are capable of illuminating a period of the 19th century whose values, particularly political values, have been partially obscured from us.

There was a time when determinism and idealism could be reconciled. They can be no longer.

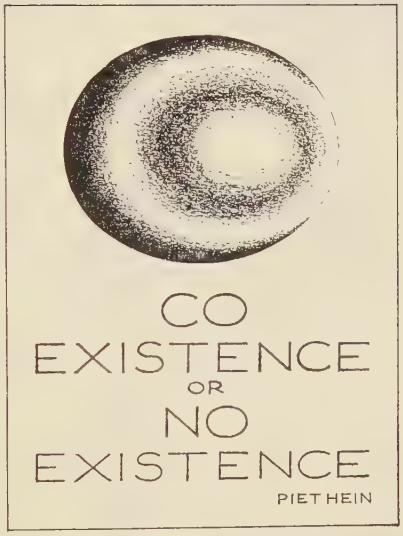
The Royal Danish Academy of Sciences in Copenhagen



Coin in the Slot Telephones for South Africa

As more and telephone systems have gone over to fully automatic operation, it will also be necessary to change the technical equipment of public telephones.

After considerable research over a number of years, a Danish telephone factory has evolved a reliable design which can be used for various types of coins and under the widely different conditions which a mechanism like this must be able to stand in contries with greatly fluctuating climatic conditions. Some time ago the firm received an order to supply 6,000 slot telephones to the Union of South Africa. The difficulties connected with the manufacture of these coin in the slot telephones have been many, since these are constructed on the electronic principle instead of using the earlier lever systems. They must be able to differentiate between several hundred kinds of coins and to work under very fluctuating climatic conditions.



To Be or not to Be

The shortest epigram in the world, at any rate compared to the content, is what foreigners call the text by the Danish author Piet Hein to the poster and sticker which he has designed for use by interested organizations in many countries. The little Shakespearean epigrem was originally the last two lines of a prologue which Piet Hein wrote for the 16 th Annual General Meeting of the International Air Transport Association in Copenhagen in 1960.

The drawing, in black and white on a blue background, comes close to the text and gives it emphasis. It is the Earth itself with its night side and a reflexion of sunlight forming the prefix: CO.

In Denmark the Anne Frank Foundation has already ordered one million copies of this design - and the author is open to any arrangement on a non-profit basis.

SAS Route to New York

This autumn it is fifteen years since SAS commenced its regular passenger service on the Scandinavia–New York route. The first type of aircraft to be used on the route was the DC-4 Skymaster. With intermediate landings at Prestwich and Gander, a DC-4 in 1946 used to take about 26 hours for the flight to New York. Today DC-8 jets fly from Copenhagen to New York nonstop in 8½ hours.

In 1946 SAS operated eight or nine return flights over the Atlantic each month, but today SAS has up to three daily flights each way on the Copenhagen-New York connection.

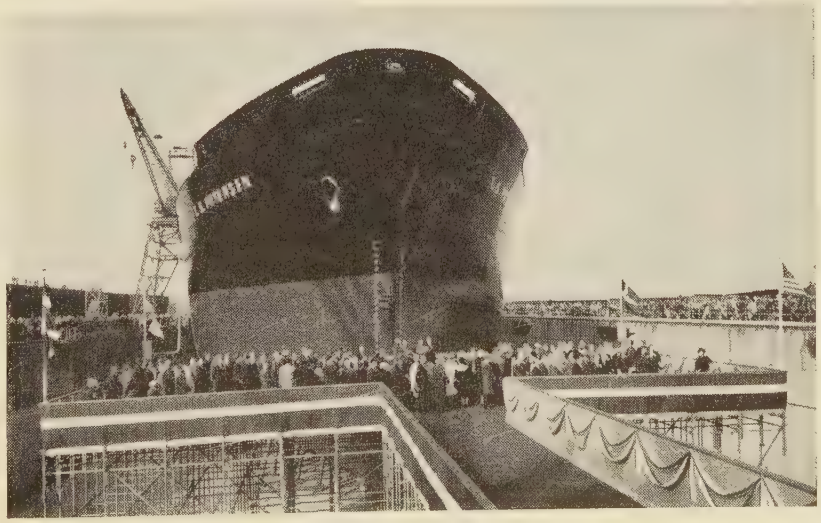
Record in Danish Shipbuilding

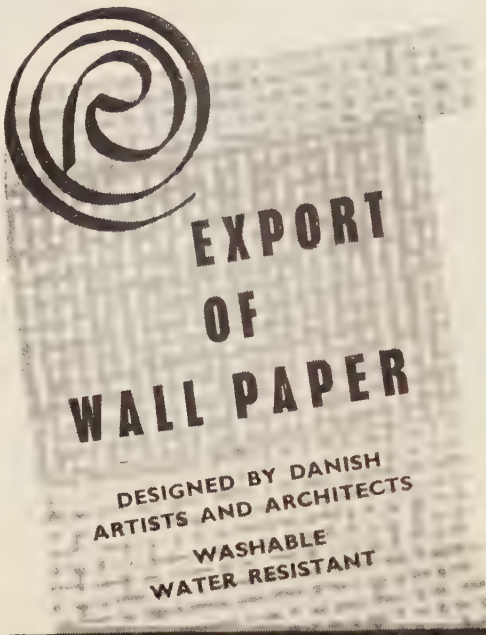
At the Lindø yard of Odense Staalskibsværft A/S a turbine driven tanker, the T. S. PETERSEN, was launched recently. This vessel is the largest ship ever to have been built at a Danish shipyard and is of 50,000 tons deadweight. It is the first of a series of five supertankers being built at the Lindø shipyard for California Transport Corporation of San Francisco.

The T. S. PETERSEN has a total of 33 cargo tanks and will be able to carry a maximum of 70 million litres of gasoline. It is the first ship to be built at the Lindø yard.

Its launching was therefore honored by the presence of a large number of foreign guests from the United States, Great Britain, Germany, Norway and Sweden.

A modern town has grown up round this shipyard, Munkebo, with its 3000 inhabitants where four or five years ago there was only a small village with a few farmyards and homes. Now the well laid out housing estate accommodates both shipwrights and administrative staff. The man behind this modern industrial fairytale is the Danish shipowner, Mr. A. P. Møller.





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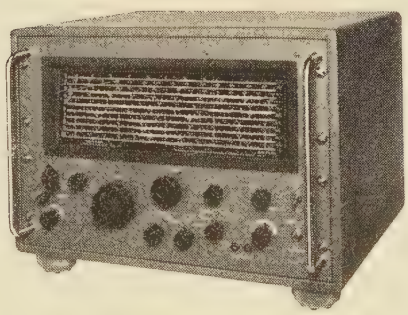

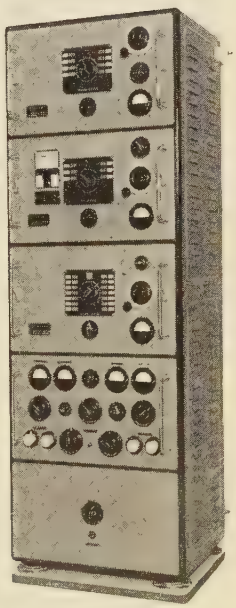

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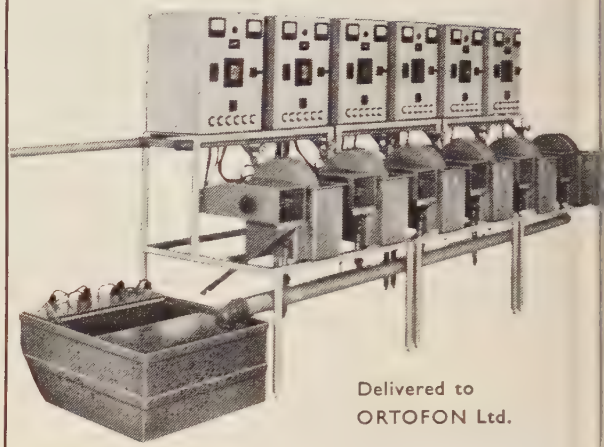

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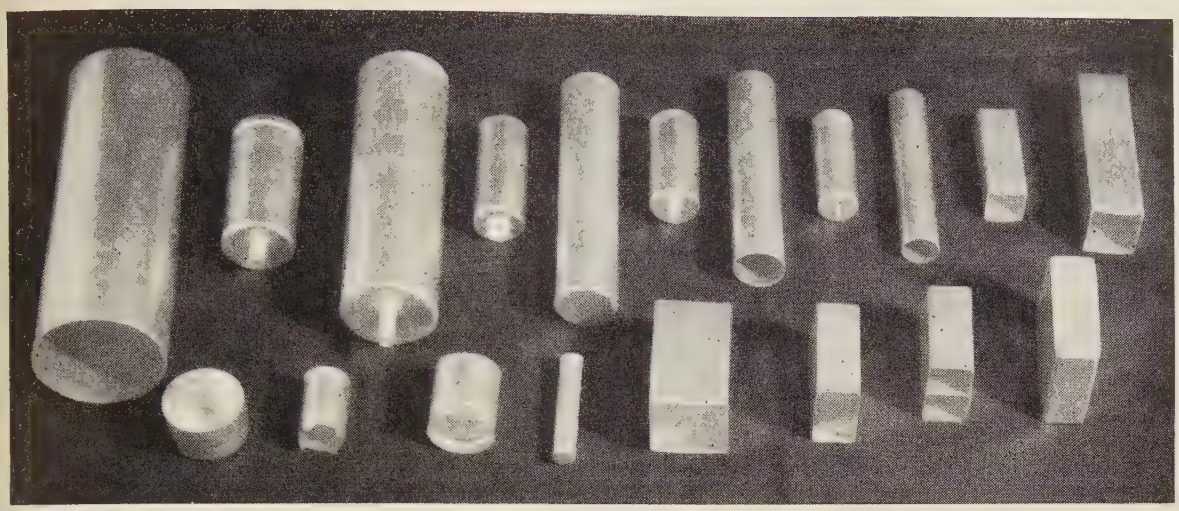

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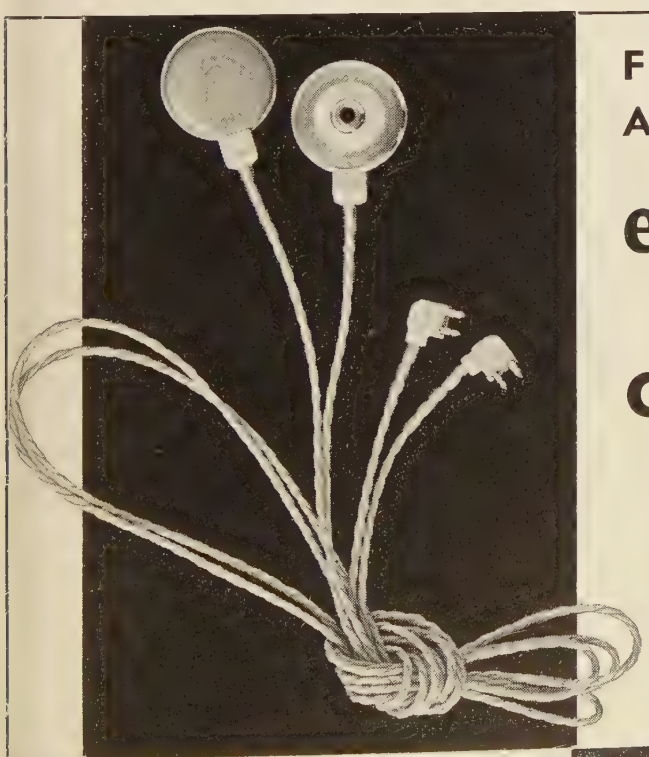

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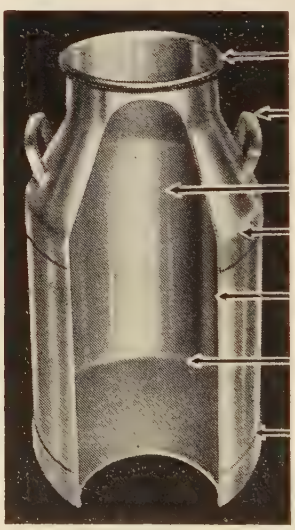

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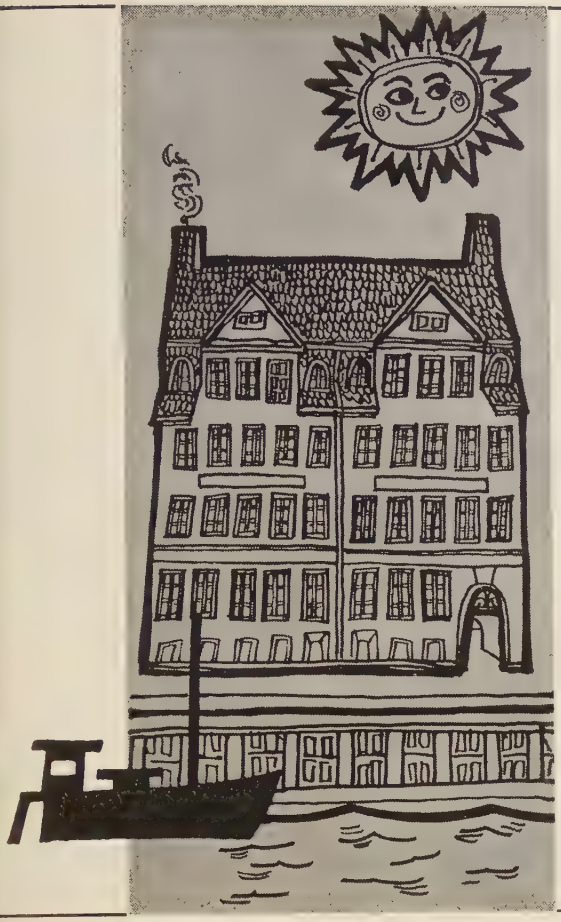

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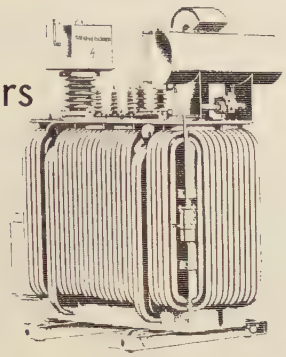

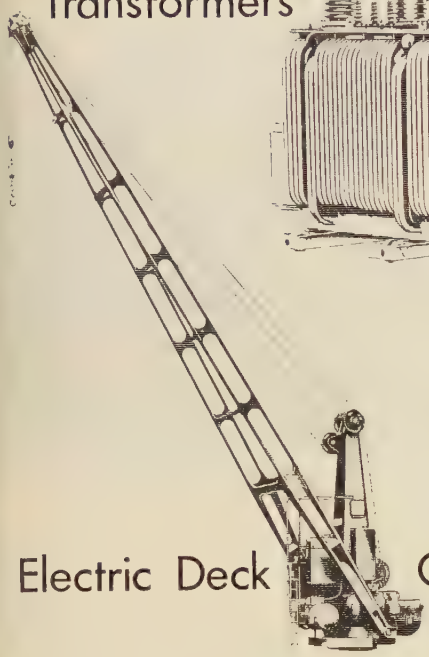

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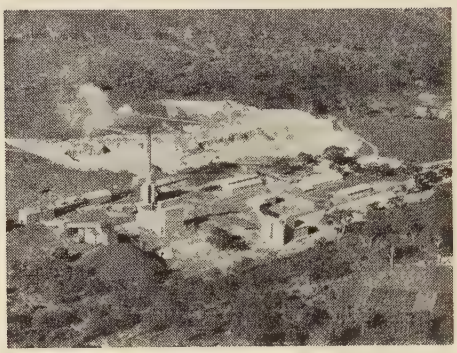

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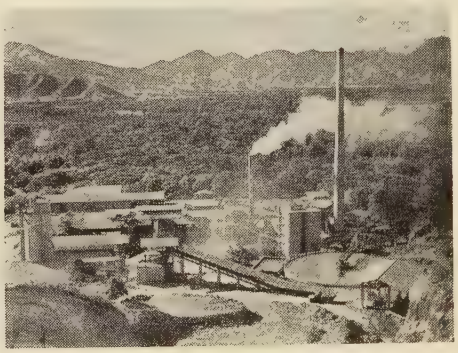

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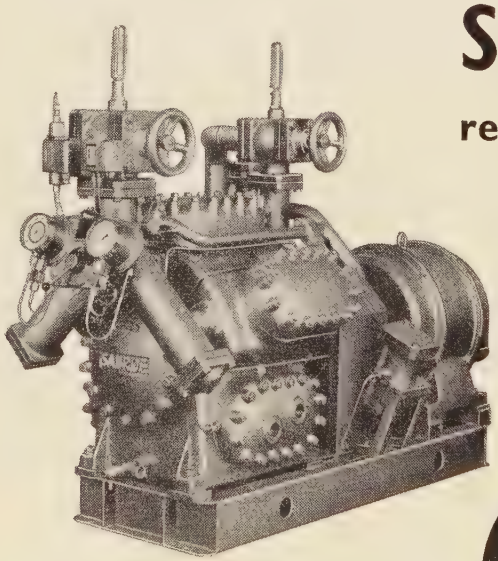

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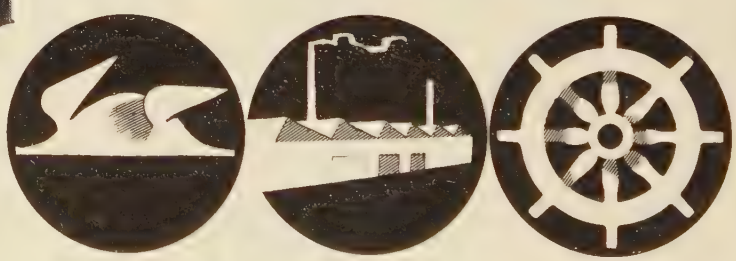

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